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Architectural Education from an English Point of View

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HAD the question been asked previous to this great struggle, what influence warfare would have upon such an essentially peaceful art as architecture, the reply would undoubtedly have been—apart from dislocation and possible complete stoppage—*nothing*, yet how different has been the experience. For a profession which for untold years had plowed its peaceful and only too well-worn furrow, to be suddenly transformed into a more or less useful branch of a conscriptive national machine under stress of war conditions, is a trial which only a homogeneous mass would be expected to survive—and with what result! The immediate requirement of great numbers of temporary buildings, hutting for camps, hospitals, depots, works, sheds, and the like, all to be erected in the quickest possible time from the stocks of materials available, presented problems in which organization and ingenuity in using the materials, or inventing new materials, played a much more important part than the designing or drawings which usually occupy the architect's time. The work needed to be executed in close touch with manufacturers or their engineers, in the fitting in of machinery, and needed also great knowledge of the working capabilities of materials so that economy might be carried to its greatest possible limit, in fact the work approached almost as closely to the engineering as to the architectural side, not counting the great powers of organization necessary to avoid delay.

There arose at once a clamor for trained men of sufficient capacity and virility to jump into strange places and to tackle new problems as they developed, a chance, one would have thought, for the architect, yet with very few exceptions it was the engineer and not the architect who filled the breach. The architect proved to be hidebound to a degree, incapable of hustle, and lacking in fertility; the engineer, on the contrary, proved to be more practical, more energetic, more receptive, and a sufficiently good draughtsman for the occasion.

As a matter of fact, the life of the nation depended not a little upon its munition buildings and the housing of its workers. So enormous were the demands that existing buildings utterly failed to keep pace, and the architect, at first so indispensable, latterly so ignored, in failing to keep his place suffered the usual law of the elimination of the unfitted. What was the cause of such a debacle?

Now architects are just as patriotic as men in other sections of public life, and the rank and file were at the front before the need for their services was perceived at the rear; once lost in the maze of millions their recall became difficult. Left—the middle-aged men and the crocks—it is cold comfort to think that had the vitality of the younger members been pitted against the young or old engineers, the result would have been different. (And, personally, I believe that the Profession contains as much good material as any other.) As it is, a scapegoat must be found—the deficiency can, it is said, only have been the result of a defective system of education. The engineers, by their system of education, their scientific methods, their elimination

of temperament and of sentiment, their constant experiments with new methods, with new materials, have kept alive the spark of evolution. Within their field they have constantly progressed, thus keeping the faculties of their students on the alert, with the result that they were found ready to undertake new methods with a fair chance of success. Well, then, let it be called the fault of the education of the architect, but, this being agreed, it would perhaps be as well to point out that it is not very logical to blame the education of the present for the defects of men educated twenty, thirty, or forty years in the past, unless it be taken for granted that no changes in system have occurred during the intervening period, an assumption which I am afraid is very likely to occur, a defect in outlook which is consistent with the primary causes of the failure. What are the defects of our educational system? In the past they have been just those things which with cumulative effect have broken down under the strain of evolution, "*blindness and conservatism.*"

To find the root of the evil, one must go back a very long way into the history of the Profession, to those days when progress began to move in the ratio of the square of the distance, at first slowly enough but with ever-increasing velocity, and eventually became too rapid to brake or to overtake. I mean the days when engineering first began to assume a definite being; when the great railways began to be built; when machinery became possible; when the whole life of the country passed in a decade from the eighteenth to the nineteenth century—the years between 1830–1840; that was the period of the architect's greatest opportunity, had he but seized it. Then the architect was engineer as well. True, some men did rise to the occasion. Many of the early railway bridges, station buildings, tunnel entrances, and the like, are quite equal to anything of their period, but the average architect was too conservative, too steeped in tradition, or, whisper it not, not fitted by his training to battle and cope with the complicated requirements of new-fangled ideas. Then, the great heyday of the pupilage system had just been passed; great architects like Sir John Soane and Wyatt ran offices which were art schools as well; the principals collected casts and drawings of all notable buildings and of their ornamental details, which their pupils spent a good part of their seven years' articles in drawing and copying; building work progressed slowly and gave ample time for leisurely designing and redesigning, model making, and experimenting, and the principal had sufficient interest in his disciples to ensure their getting what was in their day a sound insight into practical affairs, and generally fathered his pupils so that none might disgrace his office.

Unfortunately, the very success of the system, became, in the hands of more feeble successors, the fetters which prevented any departure from traditional usage, and just at this time, when the introduction of new materials demanded new methods, no efforts were made collectively to provide the technical training necessary, and so thenceforth all great engineering works (than which nothing finer can be imagined for architectural scope—great bridges and viaducts, great stations, great works of all kinds) were entrusted to the engineer without protest, while the architect continued to dream of his cathedrals, of his mansions, of his aristocratic patrons, and passed by as valueless the only vital element of his profession, i. e., *evolution.* Such was the beginning of the evil. The same tale could be repeated year by year until quite recently, how recently one dare not say—the same ignorance of progress, the same lack of foresight, the same defective preparation (except for traditional work), the same atmosphere of sanctity and unapproachableness. If there is any person on earth who really thinks he deserves a halo, it is "The Architect."

The various periodical offshoots from the Profession—the civil engineer, the quantity surveyor, the steel-work specialist, the ferro-concrete specialist, the heating and ventilation specialist, the garden specialist, the decorative specialist, the town-planning specialist—all represent evolution in progress, and each draws off more of the life-blood of an already impoverished body.

Architecture has become such a complicated affair that the sheer impossibility of any one man mastering its ramifications in a single lifetime is practically admitted. Can anything, therefore, be done which will prevent the detachment by centrifugal force of further sections of the mass? To provide any real remedy, some system must be devised which will allow the greatest possible latitude in specialization and yet retain within

the fringes of the Profession those persons whom inclination or chance has thrown into particular "lines"—a network based upon a sound common general education which will provide a common denominator for all our divergent ideals and encourage rather than discourage changes due to public evolution. Our system of education has been incorrect in outlook; we have instilled into our pupils too much the idea that a certain amount of knowledge and certain examinations passed were all that was necessary—a daily quota of cramming to produce the perfect architect, just as it does or does not the lawyer or the doctor. The only useful man in the world today is the one who can adapt himself to his particular work and do it well, and as no amount of education in the world can ever teach a man everything, it is surely the logical thing, besides teaching him as much as possible, to incidentally teach him how to teach himself to develop his powers of logical reasoning to such an extent that no matter what problem he may come up against, he will be capable of learning all about it and eventually solving it.

Education which does not leave a man capable of providing for himself, of placing him with his feet well planted on the road to knowledge, is not "evolution" but "stagnation."

I admit that not all are capable of assisting evolution, that the plodder is useful to carry out the work of the genius, but until each is tried out, who is to say which is the genius, and how is the genius to be discovered without the necessary opportunity? It is so easy to teach by rote, and so difficult to teach by inspiration, that, perhaps, this high ideal is unobtainable. Well, be it so, the argument against effort usually degenerates into the question "Is life worth living?"

So much for the educational defects, but is there not really a much greater evil still—*ignorance of organization?* The power of organization in a man is, I suppose, the power of assimilation, the unraveling of chaos, and of thinking in sequence, of determining the use to which the education he has been given can be put, of how to apply his knowledge to problems outside routine, to avoid timidity bred by lack of confidence, of ignorance of business methods engendered by a too close application to the drawing-board, of a fatal lack of enterprise gradually to be transformed into lethargy by years of abstinence; in a word, to think of *life*, to study life itself, and to realize the important bearing which the most trivial habits of our fellow creatures have upon important problems, and then to reason out future actions by drawing upon the knowledge thus acquired of the probable course of events and to provide for their reception as they occur. *Organization*, then, is bred by experience, fortified by trial, and confirmed by success—it is not rash guesswork or mad haste.

To return to education. Education, I take it, is not so much the transmission of knowledge from one person to another as it is the transmission of experience thus to enable a pupil when certain phenomena occur to recognize the symptoms and to be able to administer an antidote. His (the student's) knowledge is a personal matter built upon his experiences, the result, perhaps, of experiments conducted first according to the rules instilled and afterwards modified according to his personal success or failure. Education should therefore be conducted in such a way as to stimulate knowledge by the pupil's own experiments. The blind acceptance of the tenets expounded by the teacher cannot in the end be of any practical value, unless accompanied by the common-sense value of application. Likewise, human nature being what it is, it is valueless to expound education in any but an interesting form. After a certain time any subject may become interesting for its own sake, but up to that point it is for the instructors not to lose sight of the fact that the young mind needs constant stimulus and excitement. Again, certain subjects—for instance Historical Architecture—are easily made interesting, whereas technical subjects are difficult to make so, yet the latter are the more vital, and only an instructor with the proper gifts can hope to create interest in them. It is in the later stages where the real value of evolutionary progress arises and *sans volonte* what can be accomplished?

Therefore I conclude that lectures on highly technical subjects are valueless unless short and closely followed by individual experiments, assisted by the lecturer, on the ground covered. It is only by constant application that instruction can be translated into work of value.

Then, as to the subjects taught and how to teach them, architectural practice divides itself readily into three divisions: Design and

Draughtsmanship, Constructional Engineering, Application. Now, I agree entirely with Professor Lethaby who says that "one may only teach science, but that taste, imagination and ingenuity of application and so on may only be directed and stimulated." It would then, perhaps, be as well to take stock of our subjects and see what this means.

Design in architecture is a combination of historical knowledge, of constructive knowledge, of taste, and application—an even balance of two scientific subjects and two temperamental subjects. The first two may be taught; the second two merely directed. Of what do they actually consist?

Historical knowledge is really archæology, the history of peoples and of their works, of their ornament and of their planning to meet their particular needs and of their methods of life, a subject full of interest, easily assimilated, very useful in broadening the mind and in providing a foundation for future work—above all a simple question of facts.

Constructive knowledge is likewise archæology to a very great extent, the study of historical materials, executed works, and methods of use. Again facts and figures.

Taste, however, is a personal element liable to great variations and on which a standard is only arbitrarily set by a consensus of opinion and which is very liable to changes—witness the resurrection of the Gothic and Classical schools at intervals.

Therefore, what part does taste play in architecture? Despite its illusive qualities, its part is very important, whilst its very shades of value provide that individuality which is our modern birthright; but since one cannot teach taste, what part does it take in our education? Well, for instance, historical architecture is pure archæology until one turns on the tap of taste. Taste discriminates between good ornament and bad; determines whether proportions are good or not; weighs each century of progress with the preceding; and propounds the advancement or retrogression of art.

The education of taste is an uncertain quality; we must study all examples of admitted good taste, hear their good and bad qualities from a competent person, and thus find out whether our natural taste is in agreement with the consensus of opinion; most probably it will not be so, at any rate in the beginning, and even if at the end it disagrees considerably, it is not a bad thing for our individuality. It is a peculiarity, perhaps, noticed by others that in the raw state, on any particular subject in art, one's taste is often diametrically opposed to the opinion eventually obtained by close study. I do not mean so much in large monuments, such as cathedrals, where mass and effect are greatly contributory causes to their general appreciation, but in the smaller details—antique furniture, for example, or pictures. Therefore, good examples can produce a very great effect upon different persons without that effect being general or equal enough to enable cause and effect to be reduced to a science.

Then, as regards application.

Application is really the important element in architecture; historical research into details of design and construction are lifeless unless accompanied by application.

Application is perhaps the elf of inquisitiveness, a spirit of restless experiments and trials and searchings, a reasoning of why and wherefore, a balancing of value against value of pros and cons, the elimination after trial of the less useful, the selection of the fittest, the employment of the experience of others in selecting materials, of recognizing failure, or of continued improvement. Application is, then, the "cement" of the architectural structure, without which the bricks are useless, the binding together of the different elements to produce progress. How does one teach application?

Architectural education, up to the present, has consisted of the first two of the above only, and for the simple reason that they could be taught from the book. In architecture, so-called history and construction are inseparable. One talks about the history of architecture and historical construction, but is not the proper name "*Historical Design*," which includes the other two? For, after all, what is historical design but *construction*? At any rate, until the beginning of the renaissance movement, and even for some good time after that, all architecture was the solution of structural problems, of course, in strict relationship with the use and habits of the inhabitants, and design was the intelligent use of these problems in producing effects of mass, and light and shade.

Is it not obvious that to study the bare bones of history without application, without studying

the effects of material on planning and external effect, without following the results of deliberate design, of the evolution of ornament from a taste point of view, of understanding and valuing the constructional efforts of the Romans, for example, is to throw away a stimulant to the imagination without parallel in any other art, and to omit the one thing which architecture really is?

Yet, of what do architectural historical lectures consist but dry readings illustrated by slides? The slides alone provide a stimulus to the students, and for any value the reading has, it might be omitted, and the students allowed to draw their own information from the slides. There is no need for dimensions and dates, because the photographs carry their own scales in their figures and accessories, and, as for dates, the value does not lie in dates but in the success or otherwise of a particular construction or ornament and its inspirations for modern problems. Our studies need the stimulus of application if we are to progress and if we are not to become archæologists pure and simple.

We must also avoid the teaching of construction from the workman's point of view—technical perfection—but rather to study with a view to its simplification, improvement or more ingenious use, always also from problems of design of our own imagination. Whilst we want to know enough of the defects and values of materials, it is the workman's place to know how to work them. We have for a long time endeavored to teach pupils in their early stages practical details, which only come after great experience, but to teach such things without the specific cases in which they occur is to risk making no impression on their minds.

This introduces the last great point, and, perhaps, the most debated one of all: *Practical Experience.*

It is perfectly obvious that historical and constructional knowledge, taste and application, need practical experience.

Practical experience is covered to a great extent by application, but stress of time in schools denies the long experience necessitated on building works before practice ought to be commenced, and, contrary to the "Arts and Crafts School," I believe that practical experience must come last, when the pupil has already been prepared to discriminate between the relative importance of things and to use his judgment in their application.

The value of organization and business training for the architect of today must also receive immediate attention; the absurdity of a person attempting practice with no knowledge of bookkeeping, correspondence, office management (the art of coördinating and arranging other persons' labor) is too pressing to be ignored. A pupil enters an architect's office for experience; yes, but not to perpetuate out-of-date or rule-of-thumb methods of office management which were inadequate fifty years ago; if, therefore, he cannot get what he wants in the office, he must get it elsewhere. To improve education in certain directions and not in this also would be a calamity, and yet, despite the fact that each practising architect believes that it is only in his office that business training may be acquired, I respectfully disagree and add that it is only from outside that improvements can enter, and these improvements must be brought in by the young blood.

A Solution of the Housing Problem in the United States*

By ROBERT ANDERSON POPE

I. THE SOCIAL PURPOSE

OF THE innumerable grand projects for human betterment that have witnessed man's resolute faith in his own future, the larger number have never attained realization. Their main substance was a generous imagination, their chief animus a high-spirited altruism. Detached from the basic facts of the nature of mankind, and unrelated to other projects of reform, they have remained for the most part, inspiring ideals—chiefly potent in keeping alive man's discontent and aspiration. Through this experience we have become too fearful of fundamental reforms and yet it is only through

*One of the two prize-winning theses in the competition for a solution of the housing problem in the United States, as conducted by the Journal of the American Institute of Architects and the *Ladies' Home Journal.*

fundamental reforms that we shall produce the realization of our aims.

There are no facts in creation so real and important as the facts related to human nature; although, like the air we breathe, we are unconscious of them, nevertheless they are constantly and powerfully operative. If respected and capitalized, they will prodigiously reinforce any enterprise; if promised satisfaction and fulfillment, they will ensure success. They reckon ill who neglect them. External power or material glory is never safe if these forces, which make up the inherent qualities of mankind, are placated and unemployed.

It is, then, the fundamental and universal nature of man himself which must control every successful enterprise of human well-being, and we must therefore acknowledge the authority of man's deepest needs and capacities, and, in the light of the essential characteristics of human nature, attempt to provide that setting which will insure the development of an ample and humane life. This is primarily the field of the philosopher and the psychologist, and the essential character of human nature, in its major outlines, has already been made clear and sure by philosophers like Plato, Aristotle, and Kant, down to the modern psychologists of the Freudian school; and it is upon their conclusions, then, that we intend to base and draw up herein our new Bill of Rights.

Man is an animal and on the bodily basis rests all chance for a really satisfactory life. The barest physical necessities of man's system call for air, light, protection, space for movement, opportunities for cleanliness, and so forth. There is no possibility of men being really themselves except in a friendly physical environment that promotes a healthy, normal, communal life. Though in fact the proposition is too trite to be argued, the force and authority of it are often overlooked—and overtly this essential right has been and is daily outraged on a vast scale. The medieval and puritanical scorn of the physical life has been a profitable dogma for the exploiter, and a so-called Christian civilization, motivated by a concern for individual profit, and the obligation of a world to come, have permitted endless abuse of man's right as a physical being.

Although it is true that man is an animal, he is something more; and the cry that man shall not live by bread alone is a recognition of the truth that only in the fulfillment of his mental and spiritual functions can man find the good life.

The most universal character of normal mental process is the effort towards integration. We give things names, we register impressions, we seek to establish relations of resemblance, continuity, and dependence. We are constantly designating, classifying, relating every minute of our waking lives—trying vainly, blindly, to impart some order and control into the sorry scheme of things. That which is unrelated is mysterious, painful, baffling, and even terrifying. The Freudian method of research has shown that the lack of the integrated life is responsible for many of our pathological, as well as our psychological disabilities; and that the right life involves a complete integration which shall include within a harmonious whole man's subconscious and conscious selves.

This compelling force of human progress is the essential quality of the mind with its unconscious, persistent, and universal pressure in the direction of coherence, order, and spirituality. This is the *élan vitale*. As the acorn, by its inherent structure, predetermines the ultimate character of the oak tree, so the *élan vitale* predetermines the progress of society; and it is that fundamental character of the mind and spirit that we must recognize as the medium to which it is necessary to attach all our programs and reforms.

One of the most important characteristics of mankind which this integration must recognize is that of the creative impulse which is inherent to all men. Probably no other factor has been so outraged and denied by modern industrialism. The modern town must provide some way which, in the end, will accomplish the freedom of the workers to express this powerful impulse in forms of creative achievement.

Another phase of human need which must be recognized is the complexity of man's talents. Modern industrialism has disregarded this, to the serious detriment of society, concentrating, as it has, the whole energies of a human being on tasks that utilize but a trifling phase of his inherent capacities, while leaving the others cramped and impoverished. The price of a policy which so disregards the varied capacities of every individual may be merely a dreary,

melancholy life for one poor group of workers; or on the other hand, outraged human nature may assert itself, as it has in the past and still continues to do, through more or less criminal deeds of violence and excitement. Gambling, drunkenness, sex morbidity, reckless sabotage, are but some of the ways in which a cramped nature is meeting this phase of modern industrial life.

Among the other major inherent characteristics of mankind for which provision must be made are the herd or social instinct, the spirit of freedom, the spirit of play, and the love of the beautiful. A brief amplification of these characteristics is necessary in order to later disclose what town planning and housing technique must be devised to comply with these fundamental requirements of human nature which we have accepted as authoritative for our direction.

The herd or social instinct is the correlative of the instinct for self-preservation—gregariousness is just as ultimate as acquisitiveness. Man is, indeed, as Aristotle has said, preëminently a social being. The individual man has value in life only as a social complex. From the social whole he has derived his language, traditions, customs. To that he constantly appeals—in coöperation alone can he do his work or find his completest satisfaction. It is not merely that our material existence depends upon society, our food, clothing, shelter, education, protection; it is rather that the very quality of our minds is social. Solitude is the most cruel form of punishment. To be hated is almost preferable to being neglected. A human being, in so far as he is more than a chemical and physical complex, can be defined only in terms of social relations. He has advanced out of wildness and weakness by virtue of his infinite capacity for coöperation, for mutual aid.

It was this quality which Prince Kropotkin showed to be the dominating surviving factor in pre-historic man—a factor which involved the substitution of tribal property for individual property; and which he tells us resulted, in the prehistoric tribe, in a quality of life, idyllic in its completeness and beauty, and far more Christian than anything we know of in the world today.

Without the opportunity for association and coöperation, man becomes morbid, melancholy, hateful. He needs to give and to receive sympathy according to the cosmic law of love and self-sacrifice; to share and undertake with other human beings all manner of enterprises and activities. Only in social contact can he feel himself a real human being or ever quite truly know his own character. At the basis of all great societies there have been especially close coöperative units: The Greek state; the Hindu caste, and ryotwar; the Chinese family; the Japanese or Scotch clan; the Russian mir; the Renaissance cities; the American state and the New England town meetings.

Civilization has lost most of this fine inherent spirit of coöperation and in its loss has paid dearly. The long and brutal fight that laborers have had for even free association is a sad story in the history of human oppression. Denied the elemental right of free coöperation, it is not surprising that, when the long-denied power and exhilaration that come from association were discovered, they were for some time put to primitive and imprudent use. From every quarter of the globe and every angle of human experience comes overwhelming testimony to the magnetic and irresistible power of the spirit of coöperation. The mysterious and stubborn persistence of the Bolsheviki is due primarily to the fact that they have capitalized a vast power in the instinct for human brotherhood—a power which a complacent western civilization ignores at its peril. It is a vital, universal, essential human trait. It demands fulfillment on both a large and a small scale. It must not merely be vast and mechanical, as a great army—it must also be intimate, personal, a daily opportunity in all lives. So precious is this human value of brotherhood and solidity that war has often been defended on the ground that, despite its infinite anguish, it nevertheless recovers for a distracted civilization the precious unity which an atomistic, scientific industrialism has shattered.

The love of freedom is fully recognized as a universal and powerful character of the nature of mankind and needs to be stressed but little, yet it is so potent that full consideration must be given to it by the town creator. Modern life has imposed upon the original flexible human spirit a rigid, mechanical order, itself artificial, and, despite man's amazing adaptability, in the long run injurious. Time is divided into pieces; we stretch our lives on Procrustean beds of

clocks, calendars, routine, programs, institutions—in short, a vast, dispiriting, clanking machinery compels us at every moment. Spontaneity, verve, adventure, imagination are held rigid in iron bands so that the morbid and violent become the only accessible substitutes for a free and natural play of will and fancy.

Once released from uncongenial environment and all really artificial limitations, the human spirit tends to develop along the lines of its own well-being. Its ultimate ideals are present as driving, animating forces, within it at all times, however concealed. They naturally and powerfully predetermine growth in the right direction. This is not sentimental altruism, but facts of biology, history, and psychology. We are not arguing for dispensing with discipline or training, but simply that, if environment is provided with that which is at all congruous with man's native requirements, his own infinite passion for perfection asserts itself—slowly perhaps, but triumphantly. Man's infinite perfectibility and natural disposition to excellence is one of the profoundest truths in the universe and the one thing that makes any form of slavery outrageous and intolerable.

In accordance with this thesis we must not impose a dogmatic scheme upon the future town. As we believe in the spirit of freedom, we must provide scope for it. Our town must be so planned that social and industrial innovations and adjustments are both feasible and easy. The town planner is only providing the skeleton, the framework, the technique. Each age must fashion its own order of city as well as each people, and it must be expressive of their own interests, adapted to their own needs. At best we can give the present order its most socially helpful community plans by striving to escape cramping finality.

The so-called political freedom which men think they have enjoyed has become but the sop of industrialism, through which the attention of the workers has been diverted from the fact of the slavery of the wage system. That this situation cannot long obtain, involving as it does the denial of this enormously potent human craving, is evident by the world-wide fomenting spirit of unrest. This is well understood by thinking men everywhere, who know that the consequences of continued frustration of this human need will be measured in the blood and turmoil of revolution. But if men arise who can lead us to an industrial democracy which is a real freedom, then we shall progress by the peace of evolution rather than by the strife of revolution.

The town creator, can, as will be shown, make large contribution to the cause of industrial freedom and thereby of peaceful evolution, by the technique which he provides for this purpose in his town plan.

The spirit of play is another basic need of a full and integrated life, provision for which must be made by the town creator, since man cannot live by work alone, all our homilistical industrialists to the contrary. Even the lower order of animals play and a spontaneous expression of man's personality and emotion is a birthright, which if stolen or thrown away, must now be restored. Whether in sports or avocational hobbies, the worker must have full opportunity for some purely recreational activities. They give zest to life, and, like nothing else, they unify the disorganized and illy balanced life. The town planner must be fertile and ingenious in devising ways and means for the expression of this vital instinct.

The love of the beautiful, like the other major instincts of human kind, must be accorded fullest opportunity of expression and enjoyment if life in its finest sense is to be completely realized, whether it be in his habitation, his work, or his place of recreation. For it has inevitably an unconscious as well as a conscious influence on the quality of his life, making it always better and sweeter. By this is not meant the superimposed kind of beauty expressed through the term "City Beautiful," or some haphazard irrelevant trimmings in the way of parks and façades introduced as an afterthought indulgence of prosperity. Beauty is not some superimposed ornamentation. It is a quality of one coherent vision that lives through all its parts. The true town beautiful must be a unified whole, planned as a whole with respect to all of its features, fulfilling in a carefully interrelated scheme one coherent character. For such a town beautiful gives fullest scope to the instinct of love of the beautiful and is fit body to the true community-soul, for this esthetic unity which it fulfills is a counterpart of the ethical and logical unity of the community. Both are a complex whole of many parts. Both focus on

a central plan composed of many interests. Both hold together a dominant, persuasive character.

This, then, in the largest outline, is the social purpose our scheme is designed to serve—to provide the human flesh and spirit with an opportunity for the objective realization of its own deepest needs and capacities: to create a community in which health and happiness shall be natural and inevitable; where our basic demands for an orderly, integrated life find scope for the exercise and fulfillment of all specifically human functions; where variety and spontaneity relieve order and regulation; where freedom of every essential kind is protected and nourished; where the vital instinct for coöperation and community loyalty is stimulated and directed; where life for its own sake is worth living. For human life in itself is infinitely precious, not because it leads to something other than itself, as when beings are ground into dividends, but because there are no real values beyond spiritual values. Everything else is instrumental to the perfection of the human spirit, and our general blindness to the truth is the most fearful indictment of our time. Man is an end—not a means. To employ him as a means merely, as if inert material, is an inhuman reversal of the common truth. We must build towns, therefore, not where the worker is stored overnight for fresh production of wealth on the morrow, but where he can live constantly the distinctively human life; where, in short, nothing less than the ideal of Aristotle may prevail, that "a city is a place where men live common lives for noble ends."

The fundamental error of modern industrialism which is responsible, according to Hobson in his "Democracy after War," for most of the ills of society, such as capitalism, landlordism, militarism, and so forth, is due to the fact that the entire effort of production is motivated by the demoralizing, corroding influence of profit. The most vital function that the town-planner can have today is the provision of that technique for an industrial community, which, while it must conform to the necessary economic demands of feasibility, at the same time produces the means for escape from the demoralizing influence of work for profit and further provides the opportunity of exercising man's creative impulse in creative achievement. It needs to be emphasized that profit has been the creating and sustaining motive of industrialism since its inception. Examined from an ethical point of view, we find that profit, at least as a primary motive, if at all, cannot be morally supported; for, when judged by the product in human misery, which industrialism so motivated has superimposed upon the world for the last hundred years, there is no avoiding its indictment.

The proposed means of escape from the slavery of our industrial system, to be most successful, will involve the acceptance and the use of the present industrial order, as any nondestructive program must entail. In brief, the proposal is made that each head of a family and the individual worker be provided with enough garden space immediately contiguous to his dwelling to enable him to produce, with the intelligent direction and the coöperation of an agricultural corps of community workers, the larger part of vegetables and small fruits which he and his family consume in the course of a year. Two farms are recommended, one a crop farm and the other a dairy farm which shall be community-owned and community-operated, and in which at all times members of the community will find opportunity for compensable employment, such compensation taking the form of food-products whenever money is not available for payment. In both the private and the community gardens, children of the town will get one phase of their education while at the same time actually producing food commodities of value with which they may supplement the family income.

In addition to these means of livelihood, apart from that of work in the adjacent industries, it is proposed to furnish electric power to a basement workroom of every man's home wherein, in his moments of freedom, he may try his hand at producing those things which his heart and mind may dictate, and by which, in due season, he will be able to, if not wholly, partially support himself and family. Supplementary provision for experimental efforts in self-support in the home is proposed in a community-owned workshop, which shall be created and equipped with power and tools. Herein the men interested in the same kind of production will naturally congregate for mutual efforts and mutual support.

It is from some such beginning that we might reasonably look for a genuine renaissance of the medieval guild. To some, such proposals for

escaping the wage slavery of industrialism and for re-creating the guild method of production may seem fantastic and impractical. However, there are many favorable conditions that would tend to operate to such ends; for instance, intermittent employment, excessively arduous work, or the disagreeable or dehumanizing character of tasks which are likely to be involved by the contiguous industrial plant. When such conditions do obtain, the most enterprising and resourceful of the men engaged in such work would surely seek self-support along the lines herein indicated and, in most cases, would succeed and therein find the satisfaction which comes from the expression of the creative impulse, a satisfaction that needs no excess compensation in terms of money. Initiated, as the movement undoubtedly would be, by the abler leading spirits of the community, other men of lesser ability and courage would be attracted from industry operated for profit to one or another of the groups which produce commodities for the joy of self-expression and from which their livelihood would come as a secondary and matter-of-course result.

It is our faith, then, that through some such provision of opportunities for industrial freedom there would develop a rational, feasible, logical reincarnation of the old guild idea.

Such an unprecedented concept of industrial transformation and community development would certainly fail of realization were the initial steps of the project not guided by the ablest and friendliest of hands. It is a well-known fact that causes fail time and again from the want of competent agents. For such an undertaking, men are needed who, by the quality of their minds or the evangelical fire of their spirit, predetermine the success of any enterprise to which they give themselves. It is such a group of men and women who have projected the graduate school of social and political science, to be located in New York City, and who are the type of men and women who, by their mental equipment and their integrity of social purpose, would insure the fullest realization of these high purposes.

II. THE ECONOMIC METHOD

The most successful medium for the economical development of good towns that has yet been made use of is the copartnership plan. For nearly fifty years it has been, with some slight modifications and improvement, made use of in the English garden cities and villages, and it has accomplished those things which the program of this proposition has suggested as necessary objectives. By holding all the land of the village collectively, and by leasing instead of selling, no opportunity is ever provided for speculation in land-value increments.

Charter provisions in these towns provide for a limited number of houses per acre, which will effectually and forever prevent congestion of habitations. This, however, in future towns, must be supplemented by an experimental limitation in the floating population of a community, the limitation being determined, as Socrates has suggested, according to Plato, by that size which would produce the fullest life and yet have the quality of unity. Such a limitation of population, while it might have some disadvantages because of its arbitrary nature, will have many more advantages, such as, for instance, making it possible to provide with finality all of the social and semi-social provisions such as schools, libraries, music halls, gymnasiums, theatres, markets, and the like. With the knowledge of this finality, a higher quality and more permanent character of structure could be provided for public buildings, public parks, and playspaces.

Modifications of the copartnership plan have been suggested, perhaps as wartime measures, which did not involve having the tenant subscribe to tenant shareholders' stock. Such an alteration of this plan conflicts with one of its most important social aspects, to wit, the making of all tenants shareholding partners in the enterprise, and cannot advisedly be accepted as a proper modification of the copartnership plan.

When this method of organization is made use of, it automatically takes care of the question of taxation through the rent payment, the taxes being determined by the representatives of the tenant and non-tenant shareholders.

The purpose of taxation, however, is to assign the just and proportionate share of the cost of collective living, and while this has been successfully done in places where land is not sold by appraising the rental values of land, this method is not ideal, since excessive rentals

tend to be reimposed upon the people of a community.

An alternate form of taxation which it would be desirable to experiment with is one that would be based upon having all men, women, and children in a community give a certain percentage of their entire time to community work; the percentage being the same, such a tax would be equitable and also proportionate to a man's ability to produce for himself. Such a provision would have the effect of stimulating pride in and love for one's own community, since we love most those people and those things which we serve most. It may be objected that the community might need things which the service of members in the community could not provide. This would be met by allowing payment in amount of the equivalent of a man's time, that time for which he was taxed by the community, although no man should be allowed to substitute payment for the entire service tax. By such a provision there will never be any question of increase in land-value where the copartnership plan is made use of and where a broad agricultural and woodland belt of land surrounds a community, so as not to give any increase in land-values to the contiguous territory —a provision, which, as a matter of course, should be made for any new town.

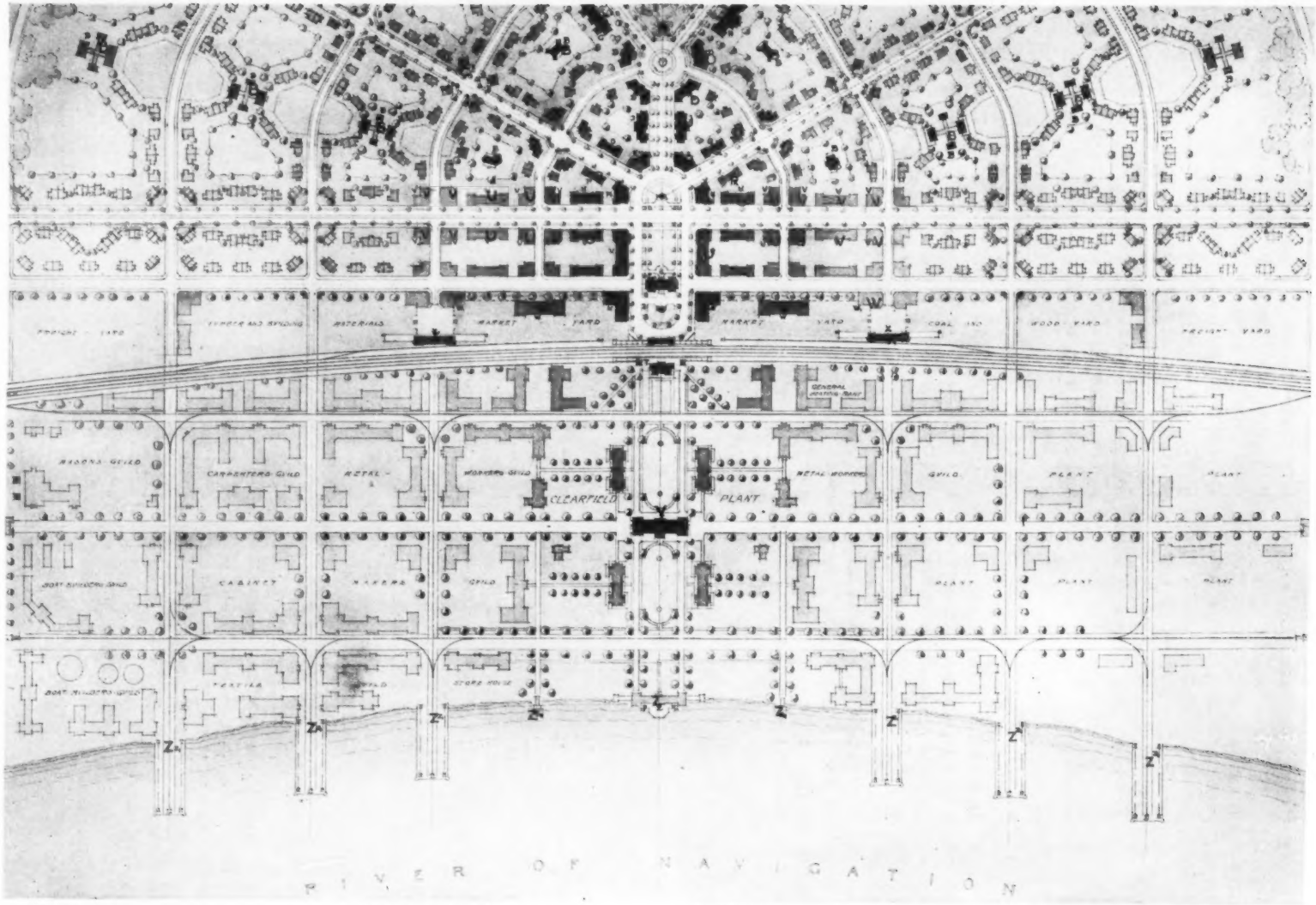
The purpose of government is to accomplish the fullest functioning of the group as to its collective material, physical, and spiritual needs, and to provide for itself every requisite of the good life which the collective efforts would more effectively and beneficially secure than would individual effort. The form of government which would prove most democratic, and yet at the same time practical, is that of the New England town with its town meeting. If the state in which the community exists permits this form, it should be made use of in the beginning. The ultimate goal as to form of government ought to be that which was characteristic of the Old World and the guild. Government arose out of a group of men functioning similarly, and it is by our functions rather than by more arbitrary methods of determining political groups that we should determine our government. The heads of guilds meet other heads of guilds in the Guilds Hall, and since all are consumers of each others' products, as well as producers of their own products, the community's best welfare is automatically insured. But the entire purpose of this thesis is to set free men so that their natural instincts may be allowed to autonomously provide, not alone their own form of government and taxation, but their entire social and industrial life; therefore little importance can be attached to the initiative policies since they will be, in such a community, eliminated or developed according to their merit and fitness soon after their inauguration.

III. THE PHYSICAL PLAN

This town plan has been designed according to the ideals set forth in the "Social Purpose," wherein the characteristics and the nature of man have been set down as the proper guiding fundamental consideration. The fact that a man is a physical animal is recognized in the commonplace, everyday provisions of the everyday town. The disposition of these provisions has been made in a more unified and economic way. The position of the shops, markets, banks, theatres, apartments, individual and multiple houses recognize and provide for this physical nature of man.

Provision for the effort to satisfy that universal character of normal mental process toward integration has been in part considered in the design of the town by the unity of its street system and by the fact that each block of the town is made a unit in itself through the tying effect which the community set of buildings, located midway in the block, provides. The unity of plan which makes for integration is further secured by the location of the principal shopping, social, and recreational centers on one main axis. It is further amplified by the centralization of these functions in orderly and logical manner, and again by the segregation of the manufacturing area from the living area, all of which tend to make life in this community an orderly, harmonious whole.

The provision for the transaction of the creative impulse has been made by setting aside land and site for groups of workshops in which the guild form of industry may develop. It is further maintained in the numerous public buildings, planned for music, art, theatricals, and all manner of recreational activities, for even in such forms the creative impulse finds ways of self-expression. The aforementioned



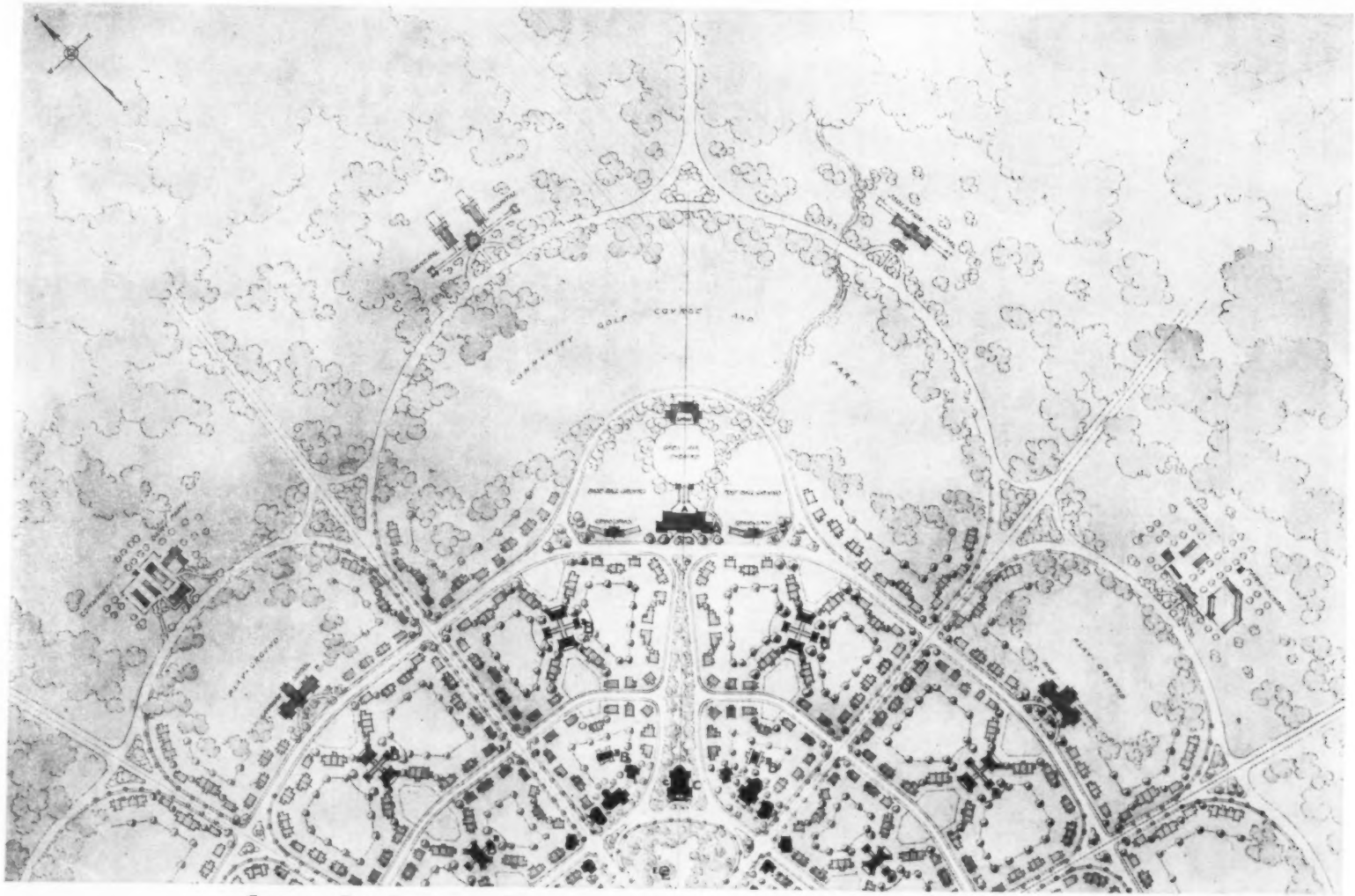
A. Gymnasium
B. Subcommunity Center
C. Community Oratorium
D. Community College and Scholars' Guild
E. Band Stand
F. Churches and Chapels
G. Museum
H. Library
J. Hotels
K. Sculptors' Guild
L. Musical Guild
M. Bank
N. Post Office
O. Dramatic Guild
P. Painters' Guild
Q. Bookbinders' Guild
R. Publishers' Guild
S. Guild Hall
T. Railroad Station
U. Stores and Offices
V. Stores and Apartments
W. Market and Halls
W. Cold Storage
X. Freight Stations
Y. Clearfield Plant Administration
Z. Club Boat-house
Z. Wharfs
Z. Boat Ferry Landings
— Subplaygrounds
— Public Parks
— Roller- and Ice-Skating Rinks
— Public Bath and Swimming-Pool
— Public Garages

H. Library
J. Hotels

Q. Bookbinders' Guild
R. Publishers' Guild

X. Freight Stations
Y. Clearfield Plant Administration

— Public Bath and Swimming-Pool
— Public Garages



COMMUNITY PLAN SUBMITTED BY ROBERT ANDERSON POPE IN THE AMERICAN HOUSING COMPETITION. See p. 305

considerations of the home and community workshop are perhaps the most important mediums for the satisfaction of this instinct.

The provision for the herd or social instinct has perhaps been the most extensive of all, not only because it is such an important phase of mankind, but its satisfaction is expressed more largely than that of other instincts in the material terms of buildings, parks, recreational fields, etc., and these are fully enumerated and described in the plan.

The provision for the instinct of freedom is most potently expressed in the plan that insures a choice between industrial effort for profit and industrial effort for self-expression. The other provisions for satisfying the spirit of freedom are not expressible in the plan.

The spirit of play has been fully met by placing at hand, contiguous to the home, a park and playgrounds and by providing in the outskirts, contiguous to the larger schools and the great gymnasiums, generous areas for recreation.

The love of the beautiful has been afforded satisfaction in the home itself by the grouping of houses and the open spaces surrounding them, the parks and playgrounds affording splendid opportunities for a beautiful background of foliage and the play of shadow and sunshine. The buildings in the social groups are so placed as to insure picturesqueness and charm, while, in the business center, the charm of order and symmetry is provided for.

The economic requisites which feasibility demands have been met by providing a minimum of street area for a maximum of house-frontage perimeter. Streets have been minimized by focusing through traffic on a few diagonal streets of sufficient dimensions. Economy in pedestrian and vehicular traffic has been insured by the focusing of the diagonals and horizontal streets on a series of points rather than upon a single point, and everywhere provision has been made for one-way traffic. An innovation, aiming to further facilitate the movement of traffic, has been introduced by flaring these diagonals for two blocks, up to reaching the point of their objectives. This provision means easy accommodations for the retardation of traffic which takes place at such points and furthermore makes provision for the increase of standing traffic.

By way of facilitating all manner of experiment in community life, a group of community buildings has been provided in the center of each block. Herein it is proposed that the nursery, the kindergarten, and the primary schools will be placed, with provision for experiment in community laundry, sewing-room, kitchen, and dining-room, also for reading-room, small library and evening school. Herein may develop the nucleus which will make democracy a real and living thing.

In this thesis we have considered housing and town-planning as of far greater import when used as a means to a new social order than as an end in itself. This we believe to be a fundamental and essential attitude toward the problem in our present-day generation when housing has such potent promise as a medium to the new order and the new day.

We have claimed a great deal for the regenerative power of our housing scheme. Beyond all debate, some such undertaking is indispensable to the new social order, yet it would be contrary to our fundamental principles to insist upon it as a cure-all. True, it will favor and support every reasonable reform—it will, of its own excellence, repair many of the blind cruelties of an uncontrolled industrial order—but new and sounder methods of education, a thoroughgoing application of the new principles of mental hygiene, a strong development of the non-militaristic internation and the consequent removal of pressure that supports many of the most intolerable features of our present social organization—these also are necessary, independent, and supplemental.

What Shall Be Done to the Cathedral of Reims?

AS a result of the careful study made of the cathedral by the "Architectes des Monuments Historiques" as well as by the "Architectes Diocesains," the expertness of whose studies can scarcely be questioned since the members of both bodies have for years been engaged in the problems involved in preserving the churches of France, there seems every reason for believing that those who originally advocated that nothing should be done to the edifice in order that it might remain as a permanent reproach to the ravages of the Germans may well reconsider their suggestion. It is, of course, true that Reims presents an exceptional problem. It has not been damaged by the slow action of time but by the stubborn, stupid, and persistent efforts of an enemy, animated by motives that cannot be assigned to those classed among military necessities. It has endured a calculated bombardment such as no building in history has hitherto suffered, and yet, thanks to the quality of the stone and the skill of its builders, together with the fact that the pillars and vaulting were designed to carry a weight far in excess of that which they had supported up to the war, its resistance to shell-fire has been nothing short of marvelous. Even the heaviest, slow-bursting shells, employed especially for the purpose of breaking down the walls of the structure, seem to have been without effect.

It is, of course, well known that the original design of the cathedral called for towers double the height of those which were built, and thus the reconstruction of the destroyed and damaged parts of the fabric seems not to involve a task too difficult of approach. According to authentic reports, only two large holes appear in the vaulting, the most important of these being above the transept. These are the result of numerous explosions and have, of course, been aggravated by their exposure to the weather of five winters. Not one of the very beautiful caps of the interior columns has been touched, nor have any of the figures on the inside face of the front wall suffered. There are no dangerous damages to any of the flying buttresses, and but a half of the old glass has been irreparably destroyed. The rose window was taken down, under the fire of shells, and can be replaced when it seems advisable. This is likewise true of seven of the large windows in the nave.

But if there are those who would still stoutly protest that nothing should be done, they would doubtless find many supporters if it were to be understood that those who advocate the preservation of the edifice were proposing a sham reproduction of the fabric as it stood in the summer of 1914. They would maintain that such a restoration would be quite as fatal, or even more so, than the complete loss of the building itself. Even though one were to dismiss the cost of such an undertaking, which is beyond calculation, there would still remain the utter impossibility of ever again attaining the architectural perfection that was. The replacement of too many stones would destroy the harmony of the patina of the walls, while the reproduction of the sculptured figures would be a travesty of art.

But if the opinions of prominent French architects are worthy of respect, it seems possible so to preserve the edifice that none of the fabric shall be damaged in the process, while enough vestiges of the sufferings of bombardment will remain to proclaim the reproach of those who cannot forgive so wanton an act, not alone in the present but in future generations. It is contended by many whose love of architecture entitles their contentions to respect, that the cry of those who demanded that Reims should be left to the invasion of vegetation and magnificent decay was merely a theory and that far from accomplishing the mission of perpetuating the greatest sacrilege of modern times, such a ruin would soon lose all traces of the bombardment and merely sink to an unimportant and forgotten pile of stones. If, on the other hand, the building can be so preserved that it will lose as little as possible of its beauty, escape the fatal hand of the ordinary restorer, and still live for centuries to bear witness to the guilt of those who violated all principles of war and of humanity, there would seem to be every reason for studying the question with an open mind.

Such a preservation as is suggested by those who are not content to let Reims fall silently

to pieces would involve the nicest discriminations. Only the most patient and faithful study could determine what sculptures should be accurately restored to their primitive beauty, and those which, by reason of the lack of castings or of sufficiently detailed photographs, would require the least local repairing necessary to avoid their fall or collapse. But such problems are not beyond solution, and while it is perhaps too much to hope that a result could be attained such as would meet with universal approval, we may well take into consideration the question of future generations and ask ourselves what is the precise nature of the duty which we owe to them. Reims is an inheritance which it is not ours to dispose of merely by satisfying ourselves that what we propose to do will meet a popular approval. It is to be hoped that it will be studied as an inheritance belonging to the world at large, and not to any age or any country. If, in the course of five or ten years, the present damage can be so far obliterated as to make the building secure for centuries, while still preserving a measure of beauty such as the future will appreciate perhaps even more than we have appreciated that of the past, it is to be hoped that the money necessary for such a work will be freely given.

It is expected that the temporary roof will be completed before the next winter comes on, while it is also hoped that Cardinal Luçon will be able to officiate in one of the slightly damaged chapels on Christmas Day, 1919. Surely this is a hopeful sign that Reims may in some manner be saved to become even more precious, as, in silent reproach, it proclaims its miraculous survival.

JACQUES GREBER.

Reconstruction in France

Information as to Offers of Assistance

The Ministry of Liberated Regions (High Committee for Coördination of Aid) has sent to the "Direction Generale des Services Francais aux Etats-Unis" the following notice to be given out as a guide to those persons or societies who may express the charitable wish to help France in reconstruction:

Offers of assistance for the rehabilitation of the devastated regions, presented in the form of proposals of Guardianship or Patronage:

First: All funds must be devoted to special and predetermined objects, and not to reconstruction in general.

Second: In view of the difficulty of dividing among the individuals funds necessarily insufficient for the reconstruction of entire cities and, on the other hand, the desirability of offering definite and precise objects to persons or societies who wish to contribute, one of the following methods should be chosen:

*(*a*) Direct distribution of supplies to inhabitants (beds, bedding, garments, household furniture or utensils, horticultural or agricultural implements, small animals, and the like).

(*b*) Assistance toward bettering or adding to (in addition to what is to be repaired as war damages) the movable or stationary equipment of reconstructed buildings, particularly by undertaking expenditures for the betterment of hygienic conditions and for improvement in household and farm economy.

(*c*) Under the law, when buildings are constructed to replace those which have been destroyed in the war, the difference between the value of the new structure and the one which was destroyed, constitutes a charge against the owner repayable to the Government within twenty-five years. Gifts of money may be devoted to the payment of these charges in full or in part.

(*d*) Advancing money to cover costs of reconstruction, with the understanding that only a part of these costs shall be repaid by the sufferer out of his indemnity from war damages.

(*e*) Participation in the reconstruction of civil or educational public buildings (city halls, churches, schools, hospitals, and the like), with a view to such improvements, embellishments, or enlargements as may be desirable.

(*f*) The construction of any kind of new local public improvement, such as water, lighting, and sanitary works, low-priced homes and public buildings.

(*g*) The establishment of philanthropic or charitable organizations such as hospitals, nurseries, dispensaries, sanatoria, kindergartens, and the like.

(*h*) The establishment of community centers, comprising recreation and meeting-rooms, educational libraries (both post-graduate and professional), equipment for games and sports for children, shower-baths, free medical services for babies, milk dispensaries and the like, all dedicated to the commemoration of victims of the war.

*The responsibility of the French Government for all damages suffered by individuals has been established by the law recently passed by Parliament.

REIMS.—Framing of the Left Door, West Façade

REIMS.—Decorative Head

REIMS —Decorative Head

REIMS.—Decorative Head

REIMS.—Decorative Head

REIMS.—A Prophet, Vaulting of the Rose Window

REIMS.—A King, North Transept

REIMS.—The Virgin and St. Elizabeth, Central Door, West Façade

Post-War Committee

THE Society of Technology Architects has recently held two meetings at Boston, both of which have been devoted to a discussion of the architect and his training. At the first of these meetings C. Grant LaFarge presented a paper on the subject of "Education Toward Reality." This paper was published in full in the June issue of the Journal. Upon the conclusion of its presentation at the meeting in question, a discussion ensued, from the minutes of which we are privileged to quote the following:

DR. MACLAURIN welcomed Mr. LaFarge's suggestion that in the future there should be closer relations between the architectural and engineering professions. "For" said he, "the principles which go to the making of a great engineer, the spirit that prevails in a great engineer must be radically and fundamentally the principles and spirit that make a great architect. Engineering is founded upon physical science, while architecture is primarily an art, but if you go deep enough into physical science and appreciate its real meaning you will realize that after all it, too, is an art. The orderly mind, so far as it is produced in the engineer, is produced by studying things that are primarily orderly in themselves and by studying the operations and principles of Nature."

"In art, on the other hand, you are dealing with order of a different kind, so that it is not easy to take over immediately the operations of teaching in an engineering school and apply them to the teaching of architecture. Yet the proper relation between design and construction can go a great way toward solving the problem before us. I believe that the present artificial separation between engineer and architect will not always exist, and that the distance between them can be diminished by the present movement in the schools to bring these two professions closer together. Another great movement referred to by Mr. LaFarge is to keep the schools as close as possible to reality. This seems to me to be a matter of profound importance, not only to architects but to every great profession. If the architect can modify his education and modify his practice so as to contribute to the solution of that vitally important human problem, surely one of the greatest advances possible to make will have been made."

In the discussion which followed it seemed to be the general opinion that reality should be brought not only into the education of the architect, but also into the schools, and that construction and design should be closely linked.

R. C. STURGIS: "Engineering is, and ought to be, an art, and the confession is equally true that architecture is absolutely a science. No one who has successfully practised architecture has arrived at success except by facing realities and solving absolute problems; and he would never get any work unless he succeeded in doing those very things. . . . We have got to study and find out just what the conditions are, and what the real problem is.

"It is one of the joys and interests of architects that we are brought into contact with so many different interests, and that one after another we have to learn and assimilate these before we can tackle our problem with any show of success. Then when we do tackle it with the fresh knowledge of that particular problem, we would be utterly lost if we hadn't a good knowledge of construction, and if we didn't know pretty thoroughly what had been done in the past. In other words, we must have our construction and we must have our history as the background on which to work. . . .

"You know as well as I do that no one man can handle any architectural problem; he must have the assistance of a great many different minds in every single thing that he does, and should learn in school and practice in life the coöperation that brings all these together; he should have the orderly mind that can bring them together and hold them together."

C. H. WALKER carried this point a little further: "The architect is a builder, a correlator of factors, as is any designer. The orderliness of the structure of the engineer is the basic quality of the reality upon which the architect builds. . . . But there is a point where architecture transcends mere building, and it is that which permeates the whole. There should be no dividing line between the work of the engineer and that of the architect; one should permeate the other, and the transcendent quality can only be built upon the union of one with the other."

J. R. COOLIDGE, JR.: "The architect is in close enough touch with reality. It takes a good many people to make a world and more than one man to make an architect. . . . I find myself firmly convinced that design and construction will not generally unite to their finest exuberance in one man. . . . It makes little difference in the final result which member of the firm is an expert in the calculation of building stresses and which is the ready designer. But that that design is sufficiently difficult to be an engrossing interest and occupation of one man's working hours, and not leave him a great deal of leisure for other things, is my firm conviction, and I think it is sustained by the fact that on the whole, the progress of design in architecture in this country is comparatively slow."

The manner by which these aims could be taught varied greatly from putting all emphasis on ability to properly present the problem, to learning the general principles in the school and getting more detailed ability afterward.

PROF. CHARLES W. KILLAM, of Harvard: "There are three ways of getting an education: (1) At schools; (2) in offices; (3) in both. . . . We are not going to educate our men simply to be draftsmen; we are educating them to be practising architects; but, as C. H. Blackall said, 'You cannot make a practising architect in four years; so at least give the men enough training to be of some use in an office when the college work is through.'

"The schools can do some things better than other agencies; they can teach design better. Construction can also be taught in the schools and made real, if we know enough and want so to teach, and we can relate it to

the design; indeed, if we have any sense, we will do just that. . . . History must be related to the design course. Freehand and clay modeling can be taught better in school than in an office. But all these should not be separate courses; they should be unified. . . . A school cannot make a businessman out of a poet, for any kind of imitation of actual business that we could introduce into the schools would be inadequate . . . ; but until the student gets into the office, these things are not real. . . .

"That brings us to the part of education that must be given to the student in the office. Is the office doing its part of the job well? . . . The architect is very much more than a draftsman. The office which never lets a man do any superintending, never lets him write specifications, never lets him do any constructing, never lets him see the operations of settling accounts—that office is not teaching its men to be architects. With such offices I think lies the duty of doing the part of the work which Mr. LaFarge has mentioned—that of giving the man a grasp of things as a whole. . . . If you want the profession as a whole to be efficient, you must do your part to make your successors start somewhere near where you left off, by passing on to them your experience in the most important part of the work—the way to handle the business, the client, the money, and the larger aspects of the profession."

Prof. W. H. Lawrence, of Technology: "There are many types of schools, varying from the professional school which offers practically nothing but professional training in architecture, to the engineering school which includes only one or two architectural courses in its program. Of these, two types interest us most: (1) The graduate school, like Harvard . . . ; (2) the undergraduate school, like the Massachusetts Institute of Technology. The second type of school is confronted with the tremendous task of combining in proper proportion, in a course of four years, both a general education and an architectural training, which latter must include some knowledge of construction. . . . The most we can do is to lay a foundation upon which the professional career may be built, and the foundation should be broad and thorough rather than narrow and highly specialized. . . .

"I believe that we have brought our work in general architecture and in engineering more closely together than they were formerly. We have in this department two courses, one in general architecture and one in architectural engineering. The latter course was established with the idea of bringing the architect and the engineer into closer association. The students of architectural engineering are taught fundamentally as engineers, but in addition are given architectural courses. . . . so that, although engineering is their main interest, they have a very substantial understanding and appreciation of the aims and ideals of the architect. . . . The result is that the students of both departments exert a broadening and beneficial influence on each other."

J. R. Coolidge, Jr: "The faculty of expression should be so important a part of an architectural education as to enable a man readily to convey to paper what he may feel; therefore I admire the immense advance in architectural training, as I see it in this room, over the drafting processes of the time when I was at Tech. That a man should learn to express his ideas through various media is to me of great consequence—of as great consequence as that he should think in terms of construction. . . . Not but what I would have the structural sense inculcated in all pupils in an architectural school; but, frankly, the watching of the process of construction, interesting as buildings in construction are, influences, I know, a man's design, even though he may not have engineering knowledge or the engineer's business methods, and I submit that that which releases his imagination—namely, the sympathetic interest with the art of the past, with the landscapes of foreign countries, with the different fine arts in this country—makes it impossible to imagine an engineering organization producing a monument to the fallen in the great war. I think, then, that this specialization is to be encouraged, that it takes lots of men to make good architects, a lot of different kinds, and that in emergency work or in regular work the possession of highly developed talents, the possession of common sympathies and a broad point of view will go much further than so-called business organization or an effort to reduce production to its lowest terms in time and cost."

C. H. Blackall: "Architecture is big and strong, better than business, better than engineering, better than poetry. I would, in a school of architecture, start with the entering class, refusing admission to those not fitted and not having a preliminary knowledge of drawing; I would omit the higher mathematics, cut out any separation of the course into different parts based on length of association with the school, making it all a study of architecture and not of a little architecture, plus engineering and a lot of other things, and would make the school one big family where all are trying to learn from each other and are learning the great secret that architecture means coöperation."

How far in these ideals the schools have gone and what has been done, H. J. Carlson of the Visiting Committee at Harvard and Technology, tells: "In looking over the work I found one thesis design of an art museum. The designer had been assistant curator of a museum, had really studied his problems, knew more about them perhaps than any one else in the school; he had designed the steel for his building, had considered the domestic engineering, and had written a careful essay discussing it all. In a recent problem at Tech the class went out and met actual clients who had already built the building. The students found out from them what their requirements were, what they didn't like, and what they would do differently if building again; from this a very interesting design problem was evolved—that is something in the way of architecture toward reality.

"In connection with the reconstruction community problem the students of this school surveyed an estate nearby, studied requirements, and made a report as to just what they would suggest building on it. They then had a competition among themselves and helped the winner to carry the design to completion. Later they considered their materials, and, but for lack of time, would have taken up the cost.

"The closer the two schools get together, the better, and we are getting them nearer and nearer every year by joint competitive problems in such an atelier system as can be had nowhere else in the country, and by comparison

and criticism of the individual courses. We are just beginning to wake up to the importance of this work, and I hope that the result of this meeting will be some sort of a committee of architects and faculties as will carry this matter further and finally make suggestions to the schools that will lead to genuine improvements."

At the second meeting, Milton B. Medary, Jr., a member of the Executive Council of the Post-War Committee, was asked to lead the discussion.

Mr. Medary said that he did not come to say anything that would lead the meeting in any particular direction, for the function of the Committee was to maintain a receptive mood. He then read the pamphlet which has been sent to all the architects in the country.

The discussion which followed centered more on the general condition of the architect than on any specific points, so that there was added a fourth consideration—the post-war position of the architect. Under the following heads have been grouped the main opinions voiced:

The Relation of the Public to the Architect

R. C. Sturgis stated his belief that unquestionably the architect has fulfilled his duties very largely to the public in this country; that the architects in Boston made the first comprehensive report on public improvements nearly fifteen years ago, and this report covered many subjects outside of architecture. What is true in Boston is, of course, true in many other cities.

Joseph D. Leland said: "Many architects are unintentionally hypocrites; they promise with great enthusiasm things they cannot produce. They do not impress on a client that everything costs money, and they are apt to underestimate the costs and be disappointed when the contract price is made. The public has asked the architects to compete, with the result that younger men get contracts wherein something is wrong and something does not work, and thus the public has become very skeptical of the architect."

Frank C. Brown: "The public seems to think that all architects are highly paid men. This impression should not exist, for some men are worth a great deal more than others. There should be a sliding scale of payment determined by ability. When we realize that George Washington, with only an acquired education, composed and designed Mount Vernon, we feel that there is something the matter with our system of education, and the public sees us mainly by our results."

The Relation of the Architect to the Building Industry

R. C. Sturgis: "The architect has been trying to foster the very best possible relations between the various professions that enter into the building trade. No country in the world has achieved in the last generation what this country has accomplished in the way of architecture, not alone on the purely artistic side, but in the practical solving of business problems. I feel that if a group of men calling themselves engineers or anything else can do as well as architects in a building problem they should be allowed to do it. Close coördination between all entering the building trade should be developed, and I believe the architect should go outside his office for the specialties and not include them in his organization. The standard documents were the result of the close coöperation of the American Institute of Architects with the building trades."

How Can Architectural Professional Societies be Improved?

Louis C. Newhall: "The professional bodies are out of touch with those whom they should represent. I wish we might have an organization here to include not only architects but the master builders, i. e., the general contractors. I would join in a recommendation for some committee to be appointed to look into this."

J. D. Leland: "The Institute should enlarge its membership and take in the younger men. It should include all who are causing so much trouble and who do not understand professional ethics and for what the organization stands."

C. D. Maginnis: "I feel that all the disabilities that we complain so much about could be brushed aside if only the profession would do away with competition, except in respect to the purely governmental buildings. The influence of the principle of competition has been thoroughly demoralizing, and, to my mind, is the absolute basis of all those troubles that we are complaining about. In order to have any standing we must be worth something and be wanted, and not stand in a position of being bartered. The only argument I can find is for the younger men, but there are young men in every profession who seem to succeed. I think that the system of competition is nothing less than insulting. Why, after thirty-five years' independent practice, should I be asked to test my skill with Mr. A. or B. of whom I perhaps have never heard."

F. C. Brown: "I agree with Mr. Maginnis in that competition should be for governmental work only."

Robert Tappan: "I believe that if any real promise is to come from the profession it is to come from the younger men. Some of my friends feel that in the matter of competitions the Institute is opposing the younger men from getting a start. I think that if the Institute were to make any ruling about competitions, it ought to prohibit entrance into competition by architects after they had practised, say five years, and should confine it to the beginner, because that is the only form of advertising that he has."

"As for the man who is established in the profession, I don't see that he needs competition. The young man has a very hard row to hoe before he becomes established and becomes a full-fledged member of the American Institute of Architects. Why should we embrace so many kinds of architects? The painters do not include the sign-painter with the members of the National Academy. We are too catholic in the Institute and should subdivide our membership. All men are not practising the same kind of architecture, and yet we are all doing it honestly and sincerely. The general idea of the contractor is that the architect is a conceited ass, a man who will not listen to a well-meaning suggestion. The finest building organizations in this country are the big contractors. Under our own noses this wonderful system of building has grown up. It can be applied to workingmen's houses and to the tallest office buildings where speed is a premium. Many architects do not see this growth, and yet I know that when that method

is employed intelligently and scientifically the problem will be solved."

The Post-War Position of the Architect

L. C. NEWHALL: "All the problems that we think are new are really very old. The trouble with us is that we are so new that we don't realize it. The same thing is true, not only with respect to housing and to general building conditions, but also in our approach to the question of architectural education. It is not so much what we teach but how we teach and whom we teach. Architecture is a matter of personality."

C. D. MAGINNIS: "I feel that the efficiency of the architect is beginning to dominate the real purpose of the architect. Was there ever a time in the history of America when the profession of architecture was so flourishing, when so high a standard was struck, when so noble a contribution has been made to American life? It seems to me that if we are to descend from the atmosphere that we have so far occupied, we must expect a spiritual loss, and that the quality of American architecture is bound to suffer, no matter how efficient we may become from the purely social point of view."

R. C. STURGIS: "I believe that all this rumpus has been due to so much unemployment by the profession and that the questions now before us are the same old questions. The war is over, and yet conditions have not materially changed. The profession is the same profession as before the war, and I can see no reason whatsoever for this sudden impetus being given to a lot of things that have been going along perfectly steadily, regularly being solved by the Institute in a systematic way, and which should be and will be continued. Above all, I absolutely depreciate the point of view that the profession is not a good profession and is not doing its work well. I agree absolutely with Mr. Maginnis that the profession was never at a higher point of efficiency than it is today."

PROF. W. H. LAWRENCE, on being asked to speak on education, said that the average practitioner does not know the problems of the schools. "He is expecting a great deal more and perhaps a different result than it is possible for the schools to accomplish with the kind of men that come to them and the time available for their education. The schools cannot turn out men prepared to be of immediate use to architects unless we give up what seems to me to be the most important thing that the school can give, namely, the training of the younger men who come to us in the fundamentals together with a general education. We have a variety of men coming into our schools, and, as Mr. Newhall has said, each man is an individual problem and the only way we can develop his individuality and imagination is to train him first to be a man and citizen and secondly an architect. We can simply start him on his way."

C. H. BLACKALL: "I cannot agree with Mr. Sturgis that there has been no change. This whole talk has been as if we were about right. A builder recently agreed to build a block for a client of mine, to furnish all the money and take as security a first mortgage at 6 per cent. His figure was lower than the lowest bid. When he had gone, I figured that he was proposing to make $45,000 on an expenditure of $100,000. Why should not I make an offer to my client and build the building for him? Indeed, I am free to say that if I had the opportunity today I would do just that thing. That is one of the new conditions that did not exist before the war.

"Now, another thing; the public does not know what we can do. There is a new crop of the public growing up and a new crop of architects coming along, and this public knows neither what we are good for nor what we can do. We must acquaint people with the knowledge of the fact that we can do something. I believe that while the architect should be able to do simple construction, his true function is that of the master builder. He is going to finance the building as well as build it, and I am deliberately trying to work in that way. I see no reason why we shouldn't put our best foot forward to our clients and then we shall avoid the misunderstandings which took place when the war broke out, so that the good people at Washington won't have the idea that the architects couldn't do large things because they never said they could and never gave the public a chance to know what they could do. I hope that when Mr. Medary goes back he will carry the distinct message that we have had a new awakening in Boston; that we are not going to be content to take a back seat for our client and let him be the sole judge of whether or not we know our business. We are going to take our wares to him and say: 'Here we have something that is of much value to you.' "

Book Reviews

Small Houses of the Late Georgian Period: 1750–1820. By Stanley C. Ramsey, A. R. I. B. A., London, 1919. Technical Journals, Ltd. (1 Guinea).

One is constantly astonished to find that it is still possible to do another excellent book on a period in architecture, for until the book appears, one would be inclined to doubt whether such a thing were possible, so carefully has the field been culled, and so able have been the cullers. Yet Mr. Ramsey has put together a hundred photographs of exceeding interest—some of them are indeed most charming—and has supplemented them with a simple narrative of the period he has selected and of the architects who contributed to make it notable in the annals of English domestic architecture.

Mr. Ramsey makes the point that the higher standard of design that seemed then to prevail, in comparison with the present, was quite the result of the fact that the employment of the architect was practically universal, and that the speculative builder had not yet made extensive progress. To be sure, there were developments which might well pass for extensive, but they were most fre-

quently carried out by the landed gentry and preserved at least a measure of dignity if not of beauty.

Mr. Ramsey includes a few examples of the terraces, as they were called, but the book is almost entirely devoted to the single house, of which he says: "The distinguishing trait of most of these late Georgian houses is a sense of order and proportion; nothing has been left to chance, all has been considered, even to the minutest detail; but together with all this carefully concealed study there is a spontaneity about them and a freshness of conception. There is a wonderful variety in their design, evidencing a wealth of invention and a fertility of imagination which is only possible when the canons and fundamentals of an art are frankly accepted. . . . They have a shy beauty, an atmosphere, as it were, of sunny charm; in the refinement of their details and in the balance of their parts they are indicative of a well-ordered and cheerful community which has found the happiest inspiration in the building of its homes. They are the product of a different age from that in which we live—of an age that had some regard for the forms and amenities of social intercourse, a time of leisure and of manners, but a period not without its limitations."

Mr. Ramsey opens the door upon a large speculative field, when he dwells upon the difference in the two ages, for a recognized difference implies a cause, and a cause is not easy to agree upon. But whatever may be the direction in which the world is now plunging on—and who knows where we are going, architecturally or otherwise?—we may be grateful that these houses of a happier day have been preserved for us in Mr. Ramsey's volume. Whatever may be our speculative tendencies, as we think upon the time in which they were built, we shall—one dares risk the assertion—never tire of their charm and distinction.—B.

Correspondence

A Plea for the Recognition of Charles Frederick Anderson as the Designer of the Wings of the National Capitol

To the Editor of the Journal:

Much has been said and written about the old statehouse in Hartford which, though historically very interesting, is of slight architectural importance. By establishing the claim that Bulfinch was its architect it lends distinction to the old building to know that the same hand that designed the rotunda and central porticoes of the capitol at Washington and of the Boston statehouse also designed the modest Hartford statehouse. Divest it of the ornamental balustrade that protects the roof and the cupola surmounting the building (both of which were added long after the building was completed) and it becomes an ordinary sensible building without any pretensions to style.

If so much pains is taken to prove it to be Bulfinch's handiwork, how much more important is it to remove the cloud of obscurity that has been allowed to settle over the reputation of the real designer of the wings of the capitol at Washington, which is acknowledged to be the finest building in the United States? The north and south wings of the capitol, which contain the Senate and House of Representatives' chambers, have long been credited "in undiluted form" to Thomas U. Walter, a Philadelphia architect who afterwards became president of the American Institute of Architects. Anderson was the real architect whose design Walter carried out. The credit of designing the wings gradually came to be wrongly attributed to Walter, and he took no pains to correct the mistake.

Being somewhat familiar with the subject, having lived in Washington with Anderson's family, I have more than once endeavored to have his claim properly acknowledged, but without any marked success. An obituary notice of Edward Clark, the successor of Walter as architect of the capitol, printed in the American Institute of Architects' official paper for 1903, refers to Walter as "the designer of the wings of the capitol," and there is no mention of Anderson's name in any of the proceedings of the American Institute of Architects, although I fully stated the case at an annual convention held in Buffalo, October, 1901. I suppose the reason that there was no report of my remarks included in the proceedings of the Institute was that it might interfere with a favorable action on an application that was then pending in Congress for a pension to some of Walter's family. I hope they got their pension, but that ought not to prevent justice being done to the memory of Charles Frederick Anderson.

Before coming to this country, Anderson was a well-known architect in Cork, Ireland, where he was in partnership with Sir Thomas Deane, whose son, the present Sir Thomas, is an eminent architect in Dublin. The firm had had a wide practice until the troubles in Ireland so diminished their work that Anderson emigrated to New York in 1848. There he formed a partnership with James Renwick, the architect of Grace Church, New York, at No. 8 Wall Street. In 1850, having separated from Renwick, he entered a public competition for designs for the extension of the capitol at Washington, D. C. Five hundred dollars was offered as a prize for the best design, but as none of the many plans received were quite satisfactory, the committee selected four of those considered to have most merit, and equally divided the $500 among the four architects. Anderson was one of those four architects and received his share of the prize.

The committee then employed an architect named Mills to compile a new plan from the four selected ones, adopting such features of them as was thought fit, evidently having no compunction of conscience in appropriating the ideas of the others without having made adequate compensation.

President Fillmore, having approved this plan, the cornerstone was laid "with suitable ceremonies," on July 4, 1851. While the foundations were being laid, Fillmore

substituted a plan of his own in place of the composite plan, at which dissatisfaction was manifested in the Senate. Soon after the inauguration of President Pierce, Fillmore's plan having been abandoned, Anderson was consulted by the President. He suggested to the President that in a government building of this magnitude an army engineer ought to be associated with him. Accordingly, a little over a fortnight after his inauguration on March 23, 1853, President Pierce transferred the work from the Department of the Interior to the War Department, and Captain M. C. Meigs of the corps of engineers was put in charge. Anderson often said that when he was staking out the building with Meigs, a misunderstanding arose between them, with the result that within a week Anderson was supplanted by Thomas U. Walter, of Philadelphia, as architect of the capitol, Meigs remaining as superintendent.

It would appear from this that soon after Pierce's inauguration Anderson had been employed as architect, although no record has been discovered of that fact, unless three warrants for $500 each issued by the Secretary of the Treasury in 1864 and 1865 are part evidence of his employment. However that may be, $1,500 evidently did not seem an adequate compensation to Anderson for his services; for, as a result of investigation of his claims by a Senate committee, it reported, March 29, 1864, in part as follows:

"It is only necessary to compare the preceding description by the committee of the composite plan adopted by them, with the plan presented by Mr. Anderson, to discover the similarity or identity of the two.

"It appears from this investigation that President Fillmore discarded the composite plan and adopted a plan of his own which, with a few exceptions, bore no resemblance to Anderson's design."

When the Fillmore plan was abandoned, Captain Meigs proceeded to revert to the Anderson design. The report goes on to say:

"It is known that Captain Meigs had one or more interviews with Mr. Anderson, with full explanations of his plans, both interior and exterior, and it would not be unreasonable to suppose that he would avail himself of every useful suggestion to be derived from such an opportunity, and it remains only to be seen by a comparison of the building with the plans of Mr. Anderson to discover whether there is any similarity or identity between the two."

After tracing the obvious resemblances, the report winds up as follows:

"The committee, from an actual inspection of Mr. Anderson's plans, and a comparison of them with the extensions as they now exist, believe that his original conceptions and plans have entered, to a considerable extent, into the existing construction of the capitol extension."

The report was accompanied by a bill appropriating $7,500 for his relief and recommending the retention of all Anderson's plans and drawings. This bill was passed at the next session and was signed by the President, February 17, 1866. Strange to say, although diligent search has been made for these plans, no trace of them has yet been found.

Before Anderson moved from New York to Washington, I had been employed for a short time in his Wall street office and he took me with him to Washington. The principal object in going there was to prosecute his claim for services on the capitol extension plans. These plans were framed and hung on the walls of the office in Washington where I worked for over a year, during which time several men, prominent in public life, came to examine the drawings, among them Senators Jefferson Davis and Jesse D. Bright. The drawings were beautifully rendered in lead pencil by a friend of Anderson's named McCoy, an engraver then in the office of the coast survey.

The bill for the relief of Anderson stipulated that his plans and drawings should be kept in the possession of the Government and it is surprising that so important evidence of Anderson's part should have mysteriously disappeared.

When Walter retired from being architect of the capitol, a position he held for fourteen years, he was succeeded by his draughtsman, Edward Clark, whom he brought with him from Philadelphia. He died in office in 1902, having been employed by the Government fifty-one years, thirty-seven of which he acted as architect of the capitol. When Clark was still living a communication appeared in the *American Architect* written by me, in which I briefly stated Anderson's claims as architect of the wings of the capitol, hoping that it would receive corroboration from Washington, but it evoked no response, except a letter, dated February 2, 1891, from a former private secretary of the late Senator Platt, Edward T. Lee, who wrote me as follows:

"Mr. Clark, the architect of the capitol, happened to be in the committee room a few days after your letter came, and I grabbed the opportunity to draw him out on the construction of the wings of the capitol, remarking incidentally that I understood an article lately appeared in one of the architectural journals giving Mr. Anderson the credit of the idea embodied in them. This was after he said Walter was the man who, with Meigs, deserved the credit. When I spoke of Anderson, he hesitated a while as if trying to evoke him from the past, and said, 'Oh, yes, he was a crazy man that hung about the committee for a long time, till finally they gave him something to get rid of him.' That ended our conversation; and my only comment is, that it is the first case I have heard of where a committee ever gave a man anything to get rid of him."

After "hanging around" for over fifteen years, Senator Bucklaw of Pennsylvania was instrumental in having partial justice done to Anderson. During a debate in the Senate, July 23, 1866, on the improvement of the ventilation and heating of the chambers, he said:

"What the committee proposes at this time is that the architect (Anderson) who designed the capitol wings originally, and a departure from whose plans has introduced every difficulty that exists now in the ventilation of the halls—I speak with confidence after three years' examination of the subject—shall proceed in accordance with the plans which have been examined and approved."

The following letter, received from the Treasury Department, confirms the payment to Anderson of $7,500 for services "in preparing plans and drawings for the capitol extension."

MR. GEORGE KELLER, Hartford, Conn.

Sir: By direction of the secretary receipt is acknowledged of your communication of the 29th ultimo, relative to a claim of Charles Federick Anderson, architect, in connection with the capitol extension, the sum of $7,500 having been appropriated for payment to him by act of February 7, 1866 (14 Stat. 577).

The said sum of $7,500 was paid to Charles Frederick Anderson by treasury warrant No. 5551, dated February 17, 1866, and the paid draft now in the files bears the endorsement "Chas. F. Anderson."

This department has no information as to any committee or other reports submitted to Congress regarding the claim, the warrant having been issued in accordance with the terms of the relief act which reads as follows:

"That the Secretary of the Treasury be, and he is hereby, directed to pay to Charles F. Anderson, architect, out of any money in the treasury not otherwise appropriated, the sum of seven thousand, five hundred dollars, in full, for time, labor, and expense in preparing plans and drawings for the capitol extension."

Respectfully,

(Signed) WM. P. MALBURN,

Assistant Secretary.

It is a satisfaction to have at least so conclusive a proof of Anderson's part in the designing of the extension of the capitol.

GEORGE KELLER.

News Notes

The Revised Scale of Professional Charges of the R. I. B. A.

The old 5 per cent rate of remuneration, which formed the basis of the schedule of charges for the members of the R. I. B. A., has been revised and a minimum of 6 per cent is to take its place. Some interesting comment upon the revision has been offered by Vernon Crompton in an article in a recent issue of the *Architect's Journal*. Among other things, Mr. Crompton said:

"It was interesting, by the way, to study the attitude of various members present at the meeting. Votes were given light-heartedly on both sides; truculence was carefully modified, and bourgeois sat cheek by jowl with hedging respectability, whilst many members were immersed in small details which were insignificant when compared with the somewhat tremendous matter at issue.

"This is not an exaggeration when it is realized that a definite step of trade, or shall we say professional, unionism was being made analogous to that taken by our friends the plumber and his mate when they demand better pay per hour.

"In both cases there is, rightly or wrongly, the same feeling that the old rate does not give sufficient opportunities for living. In both cases the same economic pressure is found to be irksome; in both cases it is felt to be better that the demands should be made unitedly rather than individually. . . .

"The social and economic sense of the present-day architect is no more advanced than that of the engineer and cotton operative of fifty years ago, when, for lack of coherence among themselves and adherence to an ideal, their attempt to raise their standard of life was a failure.

"It is probably a pity that the operation of the new scale of charges was not delayed for twelve months, as was suggested at the meeting during which the internal situation could have been solidified by obtaining the adhesion of the minority, who do not see eye to eye with the majority, for however much the middle-class architect may shrink from working-class methods, it is undoubtedly true that when once trade-union principles have been adopted, the existence of the blackleg in any number is fatal.

"Loyalty to the aspirations and ideals of the majority is the only way to success. If, however, it is suggested that no adoption of trade-union principles is contemplated, then the new scale of professional charges will descend to the level of a mere pious opinion, and many architects may be able to congratulate themselves in the future upon the amount of work they have, which has been obtained possibly because they have no scruple in undercutting their fellows."

Housing in Peru

In December last there was passed a new "Laborers' and Public Employees' Housing Law" which went into effect almost immediately. According to press reports, the President of the Republic, under the terms of the law, may sell to duly recognized societies in the city of Lima, land upon which may be built houses for workmen or Government employees who have been in service for more than five years and whose monthly salary does not exceed fifteen Peruvian pounds (about $70 in United States money). The precise method of operation of the law is not yet known, but it is hoped to publish details in a future issue. It is surely a pertinent comment upon the housing crisis in the older and larger countries of the world that a similar condition now exists in a South American Republic which certainly cannot be classed as highly industrialized.

Coöperative Society of French Architects

The Coöperative Society of Architectes Diplômes par le Gouvernement, founded with an initial capital of 200,000 francs, was definitely constituted at a general assembly of the Society on April 12 last, under the presidency of M. Jacques Hermant, President of the Société of Architectes Diplômes. The object of this new coöperative society is to offer aid to the sufferers in the devastated regions and also to the state by lending the service of strong and energetic organizations constituted by a group of *architectes diplômes* by the Government and who have enjoyed the experience of years of study and upon whose ability the public authorities and the sufferers in the war-zone may rely without fear.

Also to aid their professional comrades by providing means of employment and by discounting the advances on architectural commissions which the Society will be able to obtain from the Minister of the Liberated Regions, on account of war damages allotted to sufferers.

And, finally, to render a service to the pupils of the Ecole des Beaux-Arts who have been obliged to interrupt their studies on account of the war as well as to younger students who were preparing for entrance to the Ecole and who could not be received before the mobilization, by providing the means of existence through employment in the service of the Coöperative Society to an extent which will not interfere with their studies.

Department Store Architecture

American architects will be interested in a paper on "Great Departmental Stores" by H. Gordon Selfridge, founder of the great stores in London which bear his name. The paper was presented at a recent meeting of the London Society, and from its Journal we quote the following summary:

"Mr. Selfridge said that he looked upon architecture as perhaps the finest of all the arts, carrying with it as it did the greatest utility and the greatest beauty, as well as the greatest lasting qualities. Particularly was this so when the art of architecture was permitted to be associated with man's activities in the management of such a business as that which occupied his attention.

"These great departmental stores, which called together three or four—perhaps more—different departments of human effort, should be amongst the finest structures of our business buildings. In his opinion they were the least efficient in utilizing that beautiful art of architecture. Perhaps the greatest shopping street in the world was Oxford Street, but we could not say that its architecture was particularly fine. Public buildings were erected with great care, but the general opinion with regard to commercial architecture was that anything would do; he thought that we should have to admit that if we scanned the whole world we should fail to find many really fine buildings devoted to business purposes. The great department store was the twentieth century development of the distribution of merchandise between the maker and the consumer, and while it was perhaps far in advance of the older methods of distribution, it had still a long way to go before it reached perfection.

"Mr. Selfridge then proceeded to outline the development of commerce from the earliest method, *i. e.*, the caravan system to the present-day department stores. In the course of his address he said that when one pictured the caravans leaving the gates of Babylon, Bagdad, or Nineveh, it opened one's eyes to see any Aladdin's lamp it was desired to discover. In the ages 2,000 or 3,000 years before Christ, the Phœnicians had as much courage and imagination as any businessman of the present day could boast of. To any who appreciated the science of business, the thought of those people doing the wonderful things they did in the way of commerce so many thousands of years ago, filled the mind with charm.

"The first great market was Bagdad, and the original trader in the East did his business by caravan, leaving the gates of the city for Nineveh. He was followed by the pedlar, who, with his pack on his back, traded with individuals. Then the pedlar, finding that people would come to him, opened booths for the sale of merchandise, and for a long period the booth extended over all Europe, the pedlar having appreciated the value of the booth as a shopping-point where he could cover his wares and leave them till his return. Thus the booth was really the father of the small shop which survives today; but with the development of the booth came the great fair, which was a very important aid to commerce.

"In the early days the great fairs were always held near to the places of religious ceremony, for it was there that the people congregated, and we find that the traders took their booths right up to the doors of the church and established themselves there. The lecturer mentioned that at Nijni Novgorod was held one of the oldest (if not actually the oldest) fairs in the world. To this fair people came from all parts of the world—north, east, south and west. The trading of the Middle Ages was largely carried on by means of fairs; but with improved means of transit they became less necessary, and thus the small shop came into being.

"The small shop had, undoubtedly, a narrowing influence, but it lasted until about seventy-five years ago, when two people, one on each side of the Atlantic, seemed to have decided practically at the same time to experiment in making a big store. William Whiteley on this side and R. H. Macy in America both hit upon the same idea, but he did not believe that either had any conception of the extent to which the combination of business might be carried. The principle they followed was to sink into the business every penny that was earned in profit, and by that means its growth was rapid and enormous. Once the idea of the big store had taken root, the French merchants developed it perhaps more quickly than anybody else, and about fifty years ago the great Bon Marché in Paris had a world-wide reputation. Henceforth, they saw these departmental stores being erected in all parts of the world, although, of course, the actual number of large stores grew more quickly in America than elsewhere.

"The actual term, 'department store,' was an unhappy one that originated in America, where it became the vogue for the speculative merchant to secure larger premises than he really needed himself, and to rent out several departments (in some cases, indeed, as much as three-quarters of the whole area of a business) to other firms. There was not a family nor an individual not in need of one or more things offered for sale by the great distributing houses. It was further possible for the great store to have an influence in the direction of a higher standard of living, and it was also responsible for such influence on the lives of the very large staff employed.

"The part that a large store played in the lives of a community was not fully realised, even today, and the freedom with which the various departments were offered to the public for their general use and enjoyment made that public more familiar with them than with any other kind of business. It had frequently been said that the large store spelt ruin to the adjacent small shop, but the lecturer denied that this was so, for the large store brought custom to the neighborhood from which the small shop was likely to benefit, provided always that it was well kept and run with ability, and was in every way up to the standard of the larger business.

"Proceeding to touch upon the architectural features of the establishments, Mr. Selfridge said that it was, in his opinion, the duty of the great business house to unite beauty with its effort, and that could be done in no better way than by developing the art of architecture. Speaking generally, however, there was a great want of really fine buildings for the purpose of doing business in. The lecturer proceeded to show illustrations of large stores in Chicago, Toronto, Winnipeg, Paris, Philadelphia, Buenos Ayres, Sydney, South Africa, Madras, Shanghai, Tokyo, New York, Berlin, and London. Regarding some of the smaller London buildings, he said it was time they were either burnt or pulled down, and something better built in their stead. He thought that the merchant owed it to the community to make his business establishment as architecturally beautiful as possible, so that it might be an ornament to the city instead of, as was too often the case, an eyesore."

The Professional Idea in Architecture

In his inaugural address, Henry K. Holsman, recently elected President of the Illinois Chapter, A. I. A., said, in part:

"No new form or color invented by an individual (if such a thing is conceivable) can be called art unless it raises to the consciousness of the beholder past pleasures

of the mind or familiar instincts of the race. He who would be an artist must serve his people with an emotional understanding of them and their past.

"The profession of architecture imposes upon its members the same familiarity with the achievements of structural and social sciences. The architect must work in close coöperation and deep sympathy with other professions than his own. No individual can achieve in this profession by himself. Architecture does not depend upon the inspiration of genius but upon painstaking culture and talent and the mastery of the principles of the arts and sciences accumulated from all the ages, from men of all professional classes who have worked and thought along social, structural, and esthetic lines. Architecture is a social phenomenon not an individual phenomenon.

"That our profession is the oldest, the broadest, and the last to come to consciousness is at once our opportunity and our responsibility. Being in sympathy with so many other professions, it becomes our obligation to wake up and help to prepare for that day of full professional consciousness when men of all classes, from the humblest trades unionist to the exalted statesman, will ask and receive of the treasures laid up in professionalism. Class consciousness is the chief reason for the existence of any professional organization. . . .

"It is our chief duty to develop our organization, in order to develop our class consciousness. By serving with each other in close contact and fraternity, we can develop an awareness of our combined strength and power. To belong is not enough—to participate must be the watchword. When we know each other as individuals, we can make ourselves known to society as a class. We may not have been first in war, but we can be first in peace. Let us stand by the professional ideal, to ourselves be true, and unite in one great body and one great purpose, to serve organized society everywhere within the field of our usefulness, with one great unselfish professional organization, the American Institute of Architects."

The Nebraska State Capitol

Mr. Thomas R. Kimball, President of the American Institute of Architects, has been appointed Advisory Architect to the Nebraska State Capitol Building Commission.

Award of Institute Medal

The Institute Medal for Students has been awarded to A. Glenn Stanton, of the School of Architecture of the University of Oregon.

A Zoning Law for Washington

The Committee on the District of Columbia of the House of Representatives has been holding hearings in Washington on the Mapes Bill for regulating the height, area, and use of buildings in Washington, and to create a zoning commission for the administration of such regulations. The Commissioners of the District have testified that the law is framed after those adopted in St. Louis and New York City, and ample evidence for the necessity of speedy action has been brought forth in the testimony. Washington has suffered greatly through uncontrolled building speculation.

Registration in Washington State

The legislature of the state of Washington has passed the Architects' Registration Law, and at the last meeting of the Chapter it was voted that a delegation from the Chapter be sent to Olympia to confer with the Governor as to the appointment of administrators of the law. It was also voted that the logical appointee as representing the Chapter would be the head of the School of Architecture at the State University.

Federal Building for Seattle

In connection with the proposed new Federal building at Seattle, the Washington State Chapter, at its last meeting, voted that the services of the Chapter be tendered to the Secretary of the Treasury in the matter of selecting a site.

Increased Chapter Dues

In appointing a Ways and Means Committee to consider the question of providing a larger revenue and report back to the Chapter, the Washington State Chapter voted that it was the sense of the Chapter that the dues be increased.

State Societies

In connection with the resolution adopted at the last Convention whereby the Board of Directors was instructed to encourage the formation of state architectural societies, and coöperation with allied societies, the Secretary of the Institute has sent a communication to all Chapters of the following purport:

The Board of Directors of the Institute has decided to invite to the next convention the officers of such organizations, but meanwhile has instructed me to bring the matter directly to the attention of the Chapters with a view to encouraging the development of the relationships suggested in the various localities. I would be glad to be advised by you as to whether there is any such organization now organized in your district and if not, whether the situation seems favorable to the inauguration of such a society, and if there is such a society, to what extent your Chapter is already coöperating with it. If there is an organization, I would be glad to be advised by you of its present official address and its officers and the number of members it now contains.

It is felt that with the evident rapid increase in the number of states that will shortly have registration laws, the organization of state societies, in which the only qualification for membership will be the possession of a license, is becoming desirable.

The Board therefore requests that your Chapter give this matter careful and earnest consideration and I will be glad to assist with any further information that you may desire. WILLIAM STANLEY PARKER, *Secretary*.

Institute Business

Committee Appointments

In addition to the list of Committees published in the last issue of the Journal, the following are also completed:

Board of Examiners. E. W. Donn, Acting Chairman; A. P. Clark.

Competitions. Richard E. Schmidt, Chairman; F. J. MacDonnell, J. C. Llewellyn, Sylvain Schnaittacher, C. W. Steinbaugh, M. H. Whitehouse.

Subcommittee on Public Information. Herbert B. Briggs, Chairman; Ben J. Lubschez, D. K. Boyd, J. D. Sandham, Hugh Martin, Louis La Beaume, F. E. Davidson, E. H. Brown, W. J. Sayward.

McKim Memorial Fund. John Russell Pope, Chairman.

Building Committee. William M. Kendall, Chairman; E. W. Donn, John Russell Pope, D. Everett Waid.

Committee on Education

There has been submitted to the Committee on Education the final examination papers for architectural engineering in the School of Architecture of Columbia University. As there was some discussion at the recent Convention of the subject matter covered by the various schools of architecture, it is interesting to see the scope of the work on which the students in this school are examined. To the paper there is appended Part 5, which is a test for the application of principles. The six problems are calculations of strains and stresses accompanied by diagrams, which cannot be reproduced at this time. There is also a second paper, which is the final examination in Building Materials and Construction, which is of first-rate interest. The papers follow:—C. C. ZANTZINGER.

Final Examination for Architectural Engineering, School of Architecture, Columbia University, May, 1919

Part I. Test for Structural Sense. Value 10 Per Cent

1. The ends of a scissor truss are firmly set into the supporting walls. Later the roof is built. Will the truss develop any outward thrust? If it does, why?

2. Under common structural conditions, how deep would you indicate the following without calculations: a wooden beam spanning 10 feet—a steel I beam spanning 35 feet—a riveted steel girder spanning 50 feet—a flat wooden roof truss spanning 70 feet.

3. A reinforced concrete beam was designed with only one reinforcing rod. What was wrong?

4. Which of these cast-iron columns is the strongest and why? Both have equal heights and metal thickness of 1 inch. One is 10 inches square outside. The other is 10 inches in diameter and round.

5. Does it make any difference whether you face the flanges of a channel purlin up or down the slope of the truss?

Part II. Test for Structural Unity. Value 10 Per Cent

1. Make a freehand perspective sketch of the steel framework of a building similar to Avery Library.

2. Show enlarged sketches of at least 3 types of connections between members.

Part III. Test for Practical Details. Value 20 Per Cent

1. Footings were designed for a building which had exterior bearing walls and interior supporting columns. The loads calculated to come on them were the dead, live and wind loads. Areas for all footings were determined by dividing the imposed loads by the safe bearing power of the soil. Why did the building settle unevenly?

2. What are the probable causes of the following: (*a*) a reinforced concrete beam shows the concrete chipped away from the reinforcing rods on the under side; (*b*) a reinforced concrete beam shows diagonal cracks near the supports.

3. Using only angles and plates, make at least two sketches of built up forms for the following:—column, tension member, beam and purlin.

4. Sketch a typical bay in a steel framed building, showing spacing of columns, location of girders and arrangement of beams. Study it from a point of view of economy.

Part IV. Test for Principles of Calculations. Value 30 Per Cent

1. Outline briefly the steps necessary to design a riveted steel girder. Give formulas for calculation where necessary, but the chief thing is to include every step in the order required.

2. Outline in the same way the steps required to design a steel column.

3. Explain in detail how the tension and the compression members in a truss are designed after the stresses which occur in them have been determined.

Final Examination in Building Materials and Construction, Architectural School, Columbia University, May, 1919

Part I. Test for Structural Unity. Value 30 Per Cent

1. Show by sketches and very brief descriptions the essential characteristics of the following types of construction: (*a*) steel cage construction, (*b*) steel frame construction with non-bearing walls, (*c*) bearing wall construction, (*d*) mill construction.

2. You are pointed out two brick buildings, one is called a slow-burning type of construction, the other is said to be a fireproof building. What would you expect to find in their construction which differentiated them?

3. (*a*) From your observation, how do you think the following floors of Avery Library are supported: first, second, and drafting room. (*b*) Make a sketch through the exterior wall at the basement.

Part II. Test for Structural Details. Value 30 Per Cent

1. Make a sketch of a horizontal section through a typical double hung window for a masonry wall. Show sizes.

2. Sketch in elevation the following bonds in brickwork: Flemish, Dutch, English, Common.

3. Consider a typical construction similar to that used in a city apartment building and answer the following in relation to it: Minimum thickness of floor joists. How much bearing and how fire-cut? How anchored? What firestops are used? How are lintels reinforced? How far is wood kept from chimney?

4. Make a sketch of (*a*) steel grillage foundation, (*b*) cantilever foundation, (*c*) caisson foundation. Describe essential parts briefly.

5. Sketch a vertical section through a fireplace, showing hearth construction, smoke chamber, throat, etc.

6. (*a*) Make a sketch through at least 5 different types of joints used in interior trim and cabinet work. (*b*) Make a section through a typical interior door jamb.

Part III. Test for Properties of Materials. Value 30 Per Cent

1. (*a*) On what factors must we calculate when we consider the strength of concrete? (*b*) What aggregates are poor for fireproof construction?

2. State whether the following samples meet the specifications and if they do not what are they? You specified cypress for exterior trim and sample 3 was sent. You specified yellow pine, comb grain and sample 1 was sent. You specified white pine for sash and sample 2 was sent. You specified white oak for interior trim and sample 4 was sent.

3. (*a*) What causes efflorescence on brickwork? (*b*) Define the following: firebrick, glazed brick, pressed brick, and wire cut brick.

4. (*a*) List and define six surface finishes commonly used for granites. (*b*) In what ways is the life of a building stone destroyed by weathering?

5. (*a*) What is the difference between the dense, porous and semi-porous structural terra-cotta blocks? (*b*) List examples of where each kind is used.

6. (*a*) What are the essential differences between cast iron, steel and wrought iron? (*b*) Describe very briefly the most important uses of each in building construction.

Part IV. Test for Practical Judgment. Value 10 Per Cent

What do you advise in the following circumstances?

1. A slate roof is designed to have a pitch of 5 inches in 12 inches.

2. A wooden wainscot is erected over furring strips and the plaster begins just behind the top molding.

3. Hardwood doors and trim are being set up in a freshly plastered building.

4. Excavations in a clayey soil for a concrete footing course under a wall have been carried in one place deeper than necessary.

5. Mortar in brickwork has frozen.

Model Form of Law for the Registration of Architects

THE Fifty-second Annual Convention of the American Institute of Architects recommended that each Chapter shall take an active interest in the regulation by state legislation of the practice of architecture. The Chapters are urged to act with a view of securing the enactment of legislation or the revision of laws already enacted, in order,

First, to place the profession upon the best possible plane of educational and technical qualifications and,

Second, in order to obtain a desirable uniformity in state registration laws.

The notes are appended to the Sections to which they apply as explanatory of the theories on which the law is based and to assist the Chapters in the drafting of laws which will properly satisfy local conditions.

It is essential that a lawyer familiar with the laws of the state in which the law is to be enacted should study the bill after it has been formulated and before it goes to the legislature. The model law follows:

A Bill for an Act—To define the qualifications for the practice of architecture in the state of..... and to provide for the examination and registration of architects.

Section 1: There is hereby created a Board of Examiners and Registration of Architects, the members of which and their successors shall be appointed by, and shall hold office during the pleasure of the (name here the appointing power, preferably the department having jurisdiction of education), and which Board, subject to the approval of such (same department) shall make rules for the examination and registration of applicants for the certificates provided for by this Act.

(NOTE.—*In most states, the Board of Examiners will be appointed by the Governor, whereas those states which have state universities possess a valuable agency for the appointment and administration of the Board of Examiners and have it performed under its auspices, which ought to keep it free from politics.*

It is desirable that the State Board appointments be made as free from politics as possible.)

Section 2: The Board shall be appointed within ninety days after the approval of this Act, and shall be composed of five architects who have been in active practice in the state of.....for not less than ten years previous to their appointment. One member of said Board shall be designated by the (name here the appointing department) as Chairman *pro tem* until such time as permanent organization is effected.

Section 3: In making the first appointments under this Act, the (name here the appointment department) shall appoint one of the said members of said Board to hold office for a period of one year; one to hold office for a period of two years; one to hold office for a period of three years; one for four years, and one for five years, and thereafter all appointments shall be for a period of five years. In case a successor is not appointed at the expiration of the time of any member, such member shall hold office until his successor has been duly appointed and has qualified. In the event of any vacancy occurring in the membership of said Board in any manner other than by expiration of time, the (name here the appointing department) shall fill said vacancy by an appointment for the unexpired term.

(NOTE.—*It is obvious that the work and policies of the Board should be continuous and that they can not be if the entire membership changes at intervals.*

Registration of architects should not be placed in the hands of a Board made up of men of other professions, for it would not be fitted to examine and pass upon the qualifications of architects.

A joint registration law for architects and engineers is undesirable in that the registration of architects might be thrown entirely into the hands of engineers, notwithstanding that the Board may be made up entirely of the very best engineers in the profession. Such a Board would not be competent to examine and pass upon the qualifications of architects, for the reason that the architectural members of a joint Board might be in the minority. A combination Board is objectionable even if architects are in the majority. Engineers, if they want registration, should secure it by separate legislation which would permit them to practice as "Engineers" without any interference from an architect's registration law.)

Section 4: The members of said Board shall, before entering upon the discharge of their duties, subscribe to and file with the Secretary of State the constitutional oath of office.

Section 5: The Board of Examiners and Registration of Architects shall meet for organization within thirty (30) days after its appointment, and shall elect from its membership a president and secretary.

Section 6: The said Board shall adopt all necessary rules, regulations, and by-laws, not inconsistent with this Act, and the Constitution and laws of this state and of the United States, to govern its times and places of meeting for organization and reorganization and the holding of examinations, the length of the terms of its officers and all other matters requisite to the exercise of its powers, the performance of its duties, and the transaction of its business under the provisions of this Act. At least two meetings shall be held each year for the purpose of examination for registration.

Section 7: Three members of the said Board shall constitute a quorum, but no action at any meeting can be taken without at least three votes in accord.

Section 8: The Secretary of the said Board shall keep a true record of all proceedings of the Board and may employ such clerical assistance as the Board may deem necessary.

Section 9: The said Board shall be charged with the duty of enforcing the provisions of this Act, and may incur such expenses as shall be necessary, all of which expenses shall be paid only out of the revenue arising from this Act in the manner hereinafter mentioned and provided.

Section 10: The said Board shall file annually with the appointing department a full report of its operations.

Section 11: All fees provided for by this Act shall be paid to and receipted for by the Treasurer of the state of ....., and shall not be used for any purpose other than the purposes of this Act. The expenses of the Board of Examiners and Registration of Architects, subject to the approval of the State Treasurer, shall be paid by him upon written order and warrant of the President and Secretary of said Board.

(NOTE.—*In states in which the fees may not be sufficient for the proper conduct of the Act, it may be necessary to make special provisions and it may not be possible to allow to the Board members the per diem set forth in Sections 13 and 14. In some states an annual fee might be nominal, say $1 or $2 per year, whereas in other states having very few architects a considerably larger annual fee may be necessary to provide running expenses for the Board.*)

Section 12: The (name here proper agent of the state) shall provide and furnish suitable quarters in the city of ..... for the transaction of the business of the said Board.

Section 13: Each member of the said Board shall be entitled to $10 per diem while actually engaged in attendance at meetings or in conducting examinations.

Section 14: The members of the said Board shall be reimbursed the amount of actual expenses incurred in travel to and return from meetings, and for expenditures for hotel bills, meals, stationery, postage, printing, typewriting, and the like necessary expenses incurred in the performance of their duties under this Act, subject to the approval of the Comptroller of the state.

Section 15: Any person residing in or having a place of business in the state and wishing to practise architecture in the state, who, before this Act goes into effect, shall not have been engaged in the practice of architecture in the state under title of architect, shall, before being entitled to be or known as an architect, secure from such Board a certificate of qualifications to practice under the title of architect, as provided by this Act.

(NOTE.—*The theory of the regulation of the practice of architecture which the Institute has adopted is that no one can be admitted to practice as an architect without first establishing his qualifications and receiving a certificate issued according to the law. Everyone entitled to practice by virtue of having been in practice when the law was enacted should be required to establish that fact by affidavit. But he should not be granted a certificate unless he proves competency.*)

Section 16: Any person having a certificate pursuant to the requirements of this Act may be styled or known as an Architect, or Registered Architect.

Section 17: No person presumed to have the right to secure such certificate, because of his or her use of the title Architect prior to the time this Act goes into effect, shall assume any title indicating that he or she is an architect, or any words, letters or figures to indicate that the person using them is an architect, unless he or she shall have qualified and obtained a certificate of registration as an architect, or unless he shall have filed an affidavit establishing the fact that he was in practice as an architect previous to the passage of this Act, and has a legal right to practice without a certificate.

(NOTE.—*As a result of permitting architects who were in bona-fide practice at the time the law was enacted, to continue their practice without registration, the public will soon learn to draw a line between registered and non-registered architects so that registration becomes a valuable asset to an architect.*)

(*Also see note following Section 19.*)

Section 18: Nothing contained in this Act shall prevent the draftsmen, students, clerks-of-work, superintendents, and other employees of those lawfully practising as registered architects under the provisions of this Act, from acting under the instruction, control or supervision of their employers, or to prevent the employment of superintendents of the construction, enlargement or alteration of buildings or any appurtenance thereto, or prevent such superintendents from acting under the immediate personal supervision of the registered architect by whom the plans and specifications of any such building, enlargement or alteration were prepared. Nor shall anything contained in this Act prevent persons, mechanics, or builders from making plans, specifications for, or supervising the erection, enlargement or alteration of buildings or any appurtenance thereto to be constructed by themselves or their own employees, provided that the working drawings for such construction are signed by the authors thereof with their true appellation, as "Engineer," or "Contractor," or "Carpenter," or etc., without the use in any form of the title "Architect."

Section 19: Any one or any combination of the following practices by a person shall constitute the practice of architecture, namely: The planning or supervision of the erection, enlargement or alteration of any building or buildings or of any appurtenance thereto, to be constructed for others or by persons other than himself. A building is any structure consisting of foundations, floors, walls, columns, girders, beams and roof, or a combination of any number of these parts, with or without other parts or appurtenances.

(NOTE.—*This paragraph requires careful study. It is generally considered unwise to attempt to define the practice of architecture or to insert a definition of a building.*)

Section 20: Qualifications; examinations; fees: Any properly qualified person who shall have been lawfully engaged in the practice of architecture in the state at the time this Act takes effect, may be granted a certificate of registration without examination, by payment to the Board of fee for certificate of registration, as prescribed in Section 26 of this Act, on condition that the applicant satisfies the Board of Examiners that he is qualified to practice architecture.

Section 21: Any citizen of the United States or any person who has declared his (or her) intention of becoming such citizen, being at least twenty-one years of age and of good moral character, may apply for a certificate of registration or for such examination as shall be requisite for such certification under this Act; but before receiving such certificate this applicant shall submit satisfactory evidence of having completed the course in a high school or the equivalent thereof, as may be approved by the American Institute of Architects, and of having subsequently thereto completed such courses in mathematics, history, and languages as may be prescribed by the Board of Examiners and Registration of Architects. The examination for the above academic requirements shall be held by the Board. In lieu of such examination the Board may

accept satisfactory diplomas or certificates from institutions approved by the Board, covering the course or subject-matter prescribed for examination.

Section 22: Upon complying with the above requirements, the applicant shall satisfactorily pass an examination in such technical and professional subjects as shall be prescribed by the Board of Examiners and Registration of Architects. The Board may, in lieu of examination, accept satisfactory evidence of any one of the qualifications set forth under subdivisions (*a*) and (*b*) of this Section.

(*a*) A diploma of graduation or satisfactory certificate from an architectural college or school that he or she has completed a technical course approved by the American Institute of Architects, together with and subsequent thereto of at least three years' satisfactory experience in the office or offices of a reputable architect or architects.

The Board may require applicants under this subdivision to furnish satisfactory evidence of knowledge of professional practice.

(*b*) Registration or certification as an architect in another state or country, where the qualifications prescribed at the time of such registration or certification were equal to those prescribed in this state at date of application.

(NOTE.—*If these laws are to have any material value, it is important that registration be based on a high standard of education, and that registered architects be competent.*

The principal object of the law is to give the Board of Examiners power to be certain that every man who uses the title of "Architect" is well qualified.

The standard of technical education for architects approved by the American Institute of Architects is the only one which might be looked to as binding upon all states and there is no duty which the Institute has to perform which is more important in fixing and improving the standard of education of the architectural profession. Such standards will change from time to time, and the widest kind of flexibility embodied in a statute will be the most desirable. Any absolute standard, even the most advanced, would soon become obsolete.

If in time all states will, in their registration laws, refer to the educational standards of the Institute, it will be a means of arriving at a uniformity most desirable to pave the way for a reciprocal recognition in each state of registration in other states.

In the interests of the greatest public benefit and of good architecture, the standards of education should be raised from time to time.

A registration law should prove beneficial to the general practice of architecture. It should not be designed to bring about any immediate personal benefits. One evidence of the good effect of registration laws in states in which they are in force is that they are providing a strong incentive to would-be architects to secure a regular architectural course in a college whose diploma will insure their receiving registration under the law. That incentive leads them to qualify themselves by study and experience in an architect's office to an extent which they had not before realized to be necessary before they begin independent practice.

A person who is in bona-fide practice and has used the title "Architect" before the law went into effect should be allowed to continue his practice without interference. The law should not permit him to demand a certificate without proof of his competency.

Contractors, engineers, or owners should not be forbidden by a registration law to receive building permits so long as the local or state building ordinances are sufficiently rigid to assure that proper drawings are filed. The law should not interfere with the proper right of people other than architects, who are really qualified to file drawings, whether made by themselves or not, to do so.

There are many structures which an engineer can properly care for without the assistance of an architect, and there are many cases of small structures, drawings for which can be made by the contractor. We should rely on this attitude to enable us to coöperate on a friendly basis with the engineering profession and with contractors who will ultimately concede the moral right of the architect to take care of all work within his province, provided the architect maintains high standards of qualifications.

Great importance is attached to this view of the matter, inasmuch as it is based on the unsatisfactory experience of the profession in two or more of the states.)

Section 23: An architect who has lawfully practised architecture for a period of more than ten years outside of this state shall, except as otherwise provided in subdivision (*b*) of Section 22, be required to take only a practical examination, the nature of which shall be prescribed by the Board of Examiners and Registration of Architects.

(NOTE.—*It is considered desirable to have a renewal fee, however small, to assist the Board in maintaining a correct list of registered architects and to supply the profession and the public with such lists; it would be better to reduce the fees for the examination and registration than it would be to omit the renewal requirement.*)

Section 24: An architect seeking to practise architecture in this state, who is a citizen of a foreign country and who has lawfully practised architecture in such foreign country for a period of more than ten years, shall, except as prescribed in subdivision (*b*) of Section 22, be required to take a practical examination, the nature of which shall be prescribed by the Board of Examiners and Registration of Architects; or, if such applicant shall have been engaged in practice for a period less than ten years, he shall, except as prescribed in subdivision (*b*) of Section 22, be required to take an academic, technical, and practical examination, but in any case such applicant shall file with the Board a bond in the sum of Five Hundred Dollars ($500), and such bond and the certificate shall remain in force for a period of three years, unless revoked for cause within such period, and shall then terminate unless a renewal be granted by the Board at its discretion.

Section 25: The fee to be paid to the Board by an applicant for an examination to determine his fitness to receive a certificate of registration as a registered architect shall be Ten Dollars ($10).

The fee to be paid to the Board by an applicant for a certificate of registration as a registered architect shall be Five Dollars ($5).

The fee to be paid to the Board for the restoration of an expired certificate of registration shall be Five Dollars ($5).

The fee to be paid to the Board upon renewal of a certificate of registration shall be One Dollar ($1).

The fee to be paid to the Board by an applicant for a certificate of registration, who is an architect registered or licensed under the laws of another state or territory of the United States, or of a foreign country or province, under subdivision (*b*) of Section 22 or under Section 23, or under Section 24, of this Act, shall be Fifteen Dollars ($15).

Section 26: Certificates: Filing, recording and renewal of all examination papers and other evidences of qualification submitted by each applicant shall be filed with the Board of Examiners and Registration of Architects, and said Board shall keep a record, open to public inspection at all reasonable times, of its proceedings relating to the issuance, refusal, renewal, suspension, and revocation of certificates of registration.

This record shall also contain the name, known place of business and residence, and the date and number of the certificate of registration of every registered architect entitled to practise his profession in the state of.....

Every person granted such certificate shall have the

same recorded with the County Clerk of the county in which his principal office for the practice of architecture is located.

(NOTE.—*The recording of the certificate with the County Clerk of the county in which the architect's office is located should be sufficient. A requirement to record the certificate in each county in which work is performed by the architect is cumbersome and an unnecessary expense and labor.*

The affixing of a seal of a registered architect to plans and specifications as required by the laws of some states appears to be an unnecessary and burdensome requirement.)

Section 27: Every registered architect in this state who desires to continue the practice of his profession shall, annually, during the month of July, renew his certificate of registration, and pay to the Board the renewal fee required by Section 25, lines 12, 13, and 14, of this Act.

A person who fails to renew his certificate of registration during the month of July in each year may not, thereafter, renew his certificate except upon payment of the fee required by Section 25, lines 9, 10, and 11, of this Act.

Every renewal certificate shall expire on the thirtieth day of June following its issuance.

Section 28: Revocation of Certificates: The Board of Examiners and Registration of Architects may revoke any certificate after thirty days' notice with grant of hearing to the holder thereof, if proof satisfactory to the Board be presented in the following cases:

(*a*) In case it is shown that the certificate was obtained through fraud or misrepresentation.

(*b*) In case the holder of the certificate has been found guilty by such Board or by a court of justice of any fraud or deceit in his professional practice, or has been convicted of a felony by a court of justice.

(*c*) In case the holder of the certificate has been found guilty by such Board of gross incompetency or of recklessness in the planning or construction of buildings.

(*d*) In case it is proved to the satisfaction of such Board that the holder of the certificate is a habitual drunkard, or is habitually addicted to the use of morphine, opium, cocaine, or other drug having a similar effect.

Section 29: Proceedings for the annulment of registration (i. e., the revocation of a certificate) shall be begun by filing written charges against the accused with the Board of Examiners and Registration of Architects. A time and place for the hearing of the charges shall be fixed by the Board. Where personal service or services through counsel can not be effected, service may be made by publication. At the hearing, the accused shall have the right to be represented by counsel, to introduce evidence and to examine and cross-examine witnesses. The Board shall make a written report of its findings, which report shall be filed with the Secretary of State of the state of ..... and which shall be conclusive.

Section 30: Every person who is lawfully making use of the title of Architect in this state before the going into effect of this Act, shall, within one (1) year after the going into effect of this Act, record his name with proof of his use of such title with the Board of Examiners and Registration of Architects, such recording not to be interpreted as evidence of competency or ability unless applicant applies for and is granted a certificate of registration. Failure to record within such period, the prior use of such title shall bar the said person from thereafter claiming registration under the provisions of Section 21 of this Act.

Section 31: On and after the passage of this Act the use of the title Architect or Registered Architect, or the use of any other word or any letters or figures indicated or intended to imply that the person using the same is an architect or registered architect, without compliance with the provisions of this Act, the making of any wilfully false oath or affirmation in any matter or proceeding where an oath or affirmation is required by this Act, shall be deemed a misdemeanor punishable with a fine of not more than Two Hundred Dollars ($200), or imprisonment for not more than one (1) year, or both.

Section 32: This Act shall become effective immediately on its becoming a law.

Prepared by the Committee on Registration Laws of the American Institute of Architects.

W. P. BANNISTER
CHARLES H. BEBB
D. EVERETT WAID
RICHARD E. SCHMIDT,
Chairman.

Structural Service Department

SULLIVAN W. JONES, *Associate Editor*

In connection with professional societies, organized bodies, and the following Committees of the Institute, working toward improvements in building materials and methods, and higher ideals in the sheltering of humanity:
BASIC BUILDING CODE, CONTRACTS, FIRE-PREVENTION, STRUCTURAL SERVICE

Standards

In view of the increasing volume of construction and the responding increase in the production of building materials, we shall be able to continue with greater profit the discussion of materials if we pause to consider the forces at work to reëstablish the old commercial practices and the opposing forces which press for coöperation among producers and between producers and consumers to the end that wasteful competition may be eliminated. The principal means advocated to this end is agreement on standards and the consequent clearer understanding by both producers and consumers of the attributes which give service value and, therefore, market value to the product.

During the last two years many industries producing articles used in construction found it necessary to organize in order that they might supply the Government's war needs. Very few of these war-born organizations have broken up. They gave to many an individual member his first taste of the benefits of organized coöperative effort. Unfortunately, however, some of these groups are displaying reactionary tendencies. They appear to be turning away from the road of progress into the wilderness of conflicting selfish aims and unbridled competition with its whole brood of demoralizing influences.

The matter of standardization and the use of standards as means by which the consumer may measure the value of the product is the rock on which some of these producer organizations will split. "We face a future of standards and standardization" is the message plainly written for all who choose to read.

This message comes from the vast body of consumers, and the will of consumers must ultimately prevail, for in the last analysis, consumption controls production, and that control will become a more and more compelling force as consumers are more completely organized and use organization as a medium for research and the dissemination of exact knowledge.

At a recent meeting of a national association of manufacturers producing a material used in enormous quantities for construction, a committee proposed a minimum quality standard based upon a standard specification to be established either by the association or by the association in collaboration with the Underwriters' Laboratories; that products complying with the standard be labeled; and that the quality and fire-resistant properties be attested by two separate labels or by a single combination label.

The discussion ensuing developed the fact that there was determined opposition on the part of some of the largest manufacturers to the adoption of any standards whatever. This opposition sprang apparently from the conviction that the establishment of standards always has the effect of leveling quality downward to the lowest acceptable standard and discouraging improvement. It was pointed out that "cheap light-weight goods" were usually unprofitable to the manufacturer because of the nature of the competition in them; that "specialties" were the things that kept the industry going; and that if the product was standardized, competition would be placed on a purely price basis and salesmanship, initiative, and ambition would be unrewarded.

The business philosophy underlying such arguments is, of course, the philosophy upon which is based the so-called biological theory, and the false interpretation of "all against each, and each against all" commonly placed upon the Darwinian theory of the "survival of the fittest." It is interesting to note that the advocates of this extreme individualistic policy are apparently quite unconscious of its confliction with the evolutionary tendency among men toward association about and in support of common interests, toward coöperation and "mutual aid" which is, as Stuart Mill says, the measure of the advance of civilization. The opponents of standardization speak of the selling power of advertising without heed to the fact that the consumer pays the cost of all advertising. Advertising certainly has a legitimate and indispensable function to perform in the marketing of products, but it may be indulged in to such an extent by the manufacturer, and without cost to him, that it becomes economic waste added to the price the consumer must pay. Neither do these opponents of standardization as a means of uniting producers and consumers in support of their common interest in the product seem to understand the growing menace to industry of increasing overhead expense. The rate at which overhead is climbing in most industries is viewed with alarm and is forcing men to search for the causes. One of the causes is increasing selling costs, the increasing cost of passing the product from the manufacturer to the consumer. One means, at least, of checking this rising cost is the establishment of standards, standards that make intelligent selection by the consumer possible, and, consequently, a fair exchange of values in the market.

The fact that there is some justification for the argument that standards "tend to level quality downward to the lowest acceptable standard" should not be ignored. The causes of this tendency should be defined and understood in order that they may be met and corrected in the future. When proper standards are established and they are used by consumers as a basis of judgment, it will generally be found that the gain to the industry as a whole far outbalances any disadvantages. The cement industry furnishes an excellent illustration. The work of standardizing cement was initiated by the American Society of Civil Engineers and later was continued by the American Society for Testing Materials, the manufacturers coöperating with the engineers in the combined research. Today

there is one standard specification covering composition of cement and tests for determining its physical properties. And, as a result, the process of manufacture has been unified, and one standard product serves the needs of all consumers where in the past the manufacturer found it necessary to turn out as many as twenty-three cements of varying characteristics. The tendency which this standardization had to place competition on a "cut-throat" price basis has been successfully met by organization and the "open price." Cement is now being consumed in larger quantities than it ever would have been without the standard and without the cement manufacturers' organization—and at a reduced cost of production.

But in some other industries which have lacked organization and where standards have been established, not by agreement between producers and consumers but either by producers or by an outside agency, we find those conditions which the opponents cite as supporting arguments. The hollow-metal window industry furnishes an example. If a low insurance rate is to be secured, hollow-metal windows must carry the Underwriters' label which signifies compliance with certain minimum standards of fire-resistance. This industry, metaphorically speaking, is engaged in the business of selling labels and not windows. The fault does not lie with the Underwriters' Laboratories or the label system, or even with the manufacturers, but with the consumer who buys on price without an adequate knowledge and proper evaluation of the characteristics, other than fire-resistance, which make a window economical by reason of its long life, low cost of upkeep, and small air-leakage. The condition from which the hollow-metal window industry is suffering can be corrected by more complete organization and coöperation between producers and consumers.

Another illustration is that of the electrical industry where the minimum requirements of the "Code" combined with the consumer's ignorance of the perquisites of quality is largely responsible for destructive price competition.

All manufacturers, however, do not stand in need of education in standardization. The Institute recently received from the Elevator Manufacturers' Association a proposal that the two organizations undertake jointly the work of standardizing lifting capacities and car sizes for passenger and freight elevators. One of the stated reasons why the elevator manufacturers make this proposal is that if elevators may be manufactured in lots the cost of production can be considerably "cut down." Obviously, such standardization will be equally advantageous to manufacturers, architects, and building owners. And that is true of all intelligent standardization.

The reorganization of the American Engineering Standards Committee to provide for participation by all interested organizations in the work of standardization is an incident tremendously significant of future developments. The reasons for and objects of the reorganization are stated as follows:

"In many lines of engineering much excellent standardization work had been done before the war; the war emphasized its importance and showed most clearly the need of coöperation to prevent the confusion caused by the promulgation of overlapping standards by independent bodies. During the war the Government Departments coördinated these efforts in certain lines and greatly assisted in unifying them. The American Institute of Electrical Engineers, American Institute of Mining and Metallurgical Engineers, American Society of Civil Engineers, American Society of Mechanical Engineers, and American Society for Testing Materials, recognizing the value of what had been done, invited the Government Departments of War, Navy, and Commerce to appoint representatives to act with them to continue this work. The body so formed is the American Engineering Standards Committee. It has required considerable time to definitely formulate its objects and to arrange methods for accomplishing them that would be effective without in any way interfering with the many organizations that have been doing such excellent work in this line."

"The objects of the Association are:

1. To unify and simplify the methods of arriving at engineering standards, to secure coöperation between various organizations, and to prevent duplication of standardization work;

2. To promulgate rules for the development and adoption of standards;

3. To receive and pass upon recommendations for standards submitted as provided in the Rules of Procedure, but not to initiate, define, or develop the details of any particular standard;

4. To act as a means of intercommunication between organizations and individuals interested in the problems of standardization;

5. To give an international status to approved American engineering standards;

6. To coöperate with similar organizations in other countries and to promote international standardization."

The Proposed Construction Classification

In the Structural Service Department of the February issue of the Journal, the Committee on Structural Service announced that it was attempting to formulate a standard construction classification, and explained the reason why such a classification would be helpful alike to architects, manufacturers of building materials and contractors. With this announcement there was printed a portion of the proposed classification.

Early in April the Committee on Structural Service sent a copy of the proposed classification to the secretaries of twenty-five of the Institute Chapters. The suggestion was made that each chapter appoint a committee to consider the proposed classification and to report its views and recommendations back to the Committee on Structural Service, to be used by it as an aid in formulating a classification that would meet with general approval. Up to the date of this writing the Committee has received but four acknowledgments, and only one Chapter has acted upon the Committee's suggestion. The Committee considers the matter sufficiently important to warrant a second request for the coöperation and assistance of architects everywhere.

Copies of the proposed classification may be had upon request.

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